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ORIGINAL ESSAYS.

PAPERS *on the Summer* EPIDEMIC, *or Yellow Fever, in North America and West India Islands, during the Summer and Autumn of* 1819.

Report of the Committee appointed to investigate the causes and extent of the late extraordinary sickness and mortality in the town of MOBILE.

THE COMMITTEE REPORT,

THAT they have carefully attended to the duties assigned to them, and have examined all the wharves, the docks and vessels, the buildings and lots near the river, and find, in their examination, numerous local causes, which, under the co-operating influence of the late season, might, in their opinion, have produced the fever, independently of the supposition of its foreign importation.

Some of the most prominent we will mention, and first, the condition of the wharves, built with hewn timber, closely laid, confining the water within the outward dimensions of the wharves, and filled up with rotten logs, bushes, shavings, and other vegetable matter, covered highly with swamp mud or earth, presenting to view an immense mass, in the most noxious state of decay. Two of these wharves, about 450 feet in length, and 30 to 40 in breadth, were commenced in the spring, and the work of filling them up with logs, mud and bushes, was carried on during the summer, till the storm on the 28th of July, and the sickness of the workmen put a stop to it. They were, however,

nearly filled up to the length and breadth mentioned, and to the depth of from four to ten feet, and the surface of about a third part wss covered with materials from swamp marsh, cut into convenient sizes for the purpose, and marsh mud.—When the committee viewed these wharves, the sight was most disgusting and the smell so offensive, that they felt their health endangered by delaying about them.

The other wharves, five in number, also deserve a more particular notice. Three of them appear to be built upon the plan of the former, and with like materials; two are partly built upon piers, giving a more wholesome circulation to the water. One was built during the spring and summer, but chiefly destroyed by the storm of July, the others from one to four years since; each of them affording a mass of decaying vegetable matter, from 200 to 400 feet in length, 25 to 30 in breadth, and three to ten in depth, covered with a thin layer of earth, or mud. Such a quantity of noxious materials collected together, in a state of decay, must necessarily produce miasmata, and mortal disease.

Water Street is also observed to be filled up with the same kind of materials, in many places to the depth of from 4 to 6 feet, and computed together, might afford a mass of such matter, several hundred feet in length, and fifty in breadth, thinly covered with earth. The lots adjoining this street, on one side, are found to have been chiefly filled up with rotten logs, green pine saplings, and pine tops, with a thin layer of earth, and might comprise more than an acre of ground, thus filled from one to two feet; and on the water side, the docks are observed to have been much clogged up with timber, drift logs and old boats, which, during the low summer tides, and north wind, have collected together in the docks great quantities of sea-weed, and other filthy matter, in a state of decay, particularly under the stores standing over the water. The prevalent north wind and low tide, during the months of September and October, left the docks, and a large extent of marsh mud about them, exposed to the heat of the sun;

and the water, variously obstructed about the docks and wharves, became itself stagnant and offensive.

The committee also observe, that many old boats, or barges, damaged during the storm on the 28th of July, were suffered to remain filled with water, as well as the schooners Sally and Piper, at the wharves south of the fort, during the months of August, September and October, even to the time the committee visited them. The water in these boats and vessels, we scarcely need to add, was in a most putrid and offensive state. Several lots upon Water Street were suffered to remain covered with stagnant water, filled up with old rotten logs, old casks, bushes, and in short seem to have been receptacles for refuse and offal substances of every kind.

The badly constructed foundations of the stores and buildings near the river, retaining beneath them much unwholesome matter, or stagnant water, affecting the inhabitants with their deleterious damps and effluvia, must have proved a fertile source of disease under the influence of the late season.

To these causes, we must add, the general condition of the back yards, and enclosures in the town. All the prudential measures of an effective police seem to have been totally abandoned, and the committee are compelled to say, that every part of the town presented a striking proof of the extreme neglect, by a large portion of our citizens, of the ordinary duty they owe themselves and their neighbours—that of keeping their yards and possessions clear from every species of filth, which may be injurious to health. Ponds of water in various parts of the town were suffered to remain undrained after the rains, and became stagnant, thus infecting the air with poisonous exhalations. Dead animals, heaps of oyster shells, and other offensive matter, were commonly observed through the town. Weeds were cut down and suffered to decay without removal. A store upon one of the new wharves contained a large quantity of hides during the months of August and September, and the greater part of October, in a most offensive state;—such an outrage against the health of the inhabitants is scarcely credible.

In this general state of the town, succeeded the violent hurricane of the 28th and 29th of July, from the south and south-east, which raised the water to an uncommon height, overflowing all the wharves, and the foundations of the buildings on Water Street, even to the height of several inches in many store rooms; leaving, as the water subsided, a vast quantity of logs, drift-wood, sea-weed, and other vegetable matter in the streets and lots, much of which was there suffered to decay and infect the air. The docks were clogged up with like materials, and damaged barges and vessels. No attention whatever seems to have been paid to cleaning the dock, after the storm, to give a free circulation to the water, too much confined before by the mode of building wharves.

The committee feel much regret that they are compelled, in the discharge of the duty assigned to them, to present such a view of the town anterior to, and immediately after, the storm in July; but the facts were obvious to all, whether citizens or strangers, and evince an almost unparalleled indifference in regard to our own health. In such a state of our town, the most strenuous advocates for foreign importation of the yellow fever, will surely admit that there existed abundant causes for less malignant fever.

But we have to add to the causes enumerated, the potent influence of a most unprecedented season, the last generally moderate, very dry, and less severe than usual. The rivers Alabama and Tombecbee scarcely reached the height of their banks; during the winter not more than half the usual quantity of rain fell. The spring was cool and chilly; in March, a severe frost, which killed the early garden beans, corn and other tender plants.—April, May, and the early part of June, afforded light falls of rain, very seasonable for vegetation: winds generally south and south-west. June and July were uniformly hot—greatest heat 92 degrees. The storm of July 28th, terminated a long drought, and deluged the whole country around; all the lesser rivers and creeks overflowed their banks to the height of winter floods. From the 28th of July to the 11th of September it rained without a day's intermission.

and often the clouds melted in torrents. All the neighbouring swamps, and low grounds about the town, were filled with water to a height unexampled at that season of the year.

On the evening of the 10th of September, it cleared off—wind north-west and a hot sun, and so continued for 66 days, to November 16th, the wind varying from north-west to north and north-east,—during the whole of this period, there was scarcely rain sufficient to lay the dust in the streets: in November, however, the wind was occasionally south and south-west.—The effect of such an unexampled series of weather, such an excessive drought following a flood of rain, in the month of August, with the influence of the combined causes aforementioned, upon the human constitution, as exhibited in this town, the committee will carefully relate. During the previous winter, spring and summer, to the first of July, the town was healthy, and no unusual sickness appeared. In the latter part of July a number of violent cases of bilious fever occurred among persons unaccustomed to the climate, and some of a more questionable character. Several persons employed as workmen, in filling up one of the new wharves, were taken violently ill, and died after a short illness of two or three days. About the same time two persons, usually employed about Dauphin Street wharf, were taken in a like manner, and died after a short illness. A number of carpenters, and sailors, employed about the wharf south of the fort, and who were often on board the schooner Sally, filled with stagnant water and the steam saw mill, where there was a pond of like offensive water, were taken with violent fevers, and several of them died; but as the physicians who attended all the persons alluded to, are dead, the peculiar symptoms of the fever cannot be well ascertained. It is, however, known that Dr. Lawton, one of the attending physicians, spoke of these cases as malignant fever. Soon after the cases occurred, Snyder, an engineer, at work on a steam boat, at the same wharf, died with violent symptoms of fever, after an illness of five days. Plank, who attended Snyder, and was employ-

ed at the same place, and a Dutch servant boy, who lived in the house where Snyder died, were in a few days after taken with like symptoms of fever, and died on the third or fourth day. All these cases were, by the attending physicians (now dead), declared cases of yellow fever, and it is in evidence to the committee that they died with *black vomit*. Snyder died on the 7th of August, and Plank on the 9th; several other cases of like fever occurred about the same time among the workmen, at one of the new wharves, and terminated fatally, after a short illness.

At the two wharves mentioned, the first unequivocal cases of the yellow fever made their appearance, and about the same time, others occurred, which terminated fatally, of persons usually about the stores, near the wharves and river, about the same period. A young man, of the name of Carson, died on the 26th of August, after an illness of 48 hours, with unequivocal symptoms of yellow fever; he occupied a store near the river and the wharves. Ellsworth died on the 5th of September, after an illness of about 48 hours, and 17 days after the arrival of the sloop Patriot from the Havana, in which he came passenger from that place; he also occupied a store near the river and wharves.

But as there are persons who strenuously maintain an opinion, that the fever was imported into this town from the Havana, in the above-named vessel, the committee have given the subject diligent attention, and have examined a number of persons, and taken their examination in writing, particularly the officer of the customs, who first visited the vessel, and a sailor, who was on board the vessel during the voyage. The vessel arrived at the wharf, direct from sea, on the 19th of August, after a passage of 15 days from Havana. The officer states, that "he was the first person on board the Patriot after her arrival—that he examined her cabin, hold and cargo—that the cabin and hold of the vessel appeared, from any thing he could discover, in a pure and wholesome state. Sixteen bags of coffee, however, were wet and considerably damaged, and

some fruit rotten; the rest of the cargo in good order—that he attended the unlading of the cargo three days: the master, passengers and crew appeared to be in good health, excepting Graham, a seaman, and the cook, who appeared to have had a fever—Graham was able to do duty on board—the cook not much unwell—that the vessels which arrived at Mobile during the months of June, July and August, were generally healthy—no vessel except the Patriot arrived from a West India port. The schooner M'Donough arrived the 17th of July from Nassau, N. P." He further states that "he took care of Snyder and Plank during their illness, and assisted in burying them—that the attending physicians, Lawton and Robinson, pronounced their disease yellow fever, both before and after their deaths—that they both died with black vomit on the third or fourth day."

Graham, the seaman, states, that "he shipped on board said sloop at New Orleans, and was on board when she sailed from Mobile—nine persons were on board outward, four of which were passengers; one passenger died at the Havana three days after he arrived—had seven passengers on board when the vessel left Havana—no person unwell when they left it or during the voyage, excepting the cook and himself—the cook was sick all the time he was on board at Havana, and went on board unwell—thinks he had not a malignant fever—took no medicine; had none on board—and that the passengers knew his situation when they came on board."

From the most diligent inquiry in regard to the state of the town, and the cases of fever, which had existed, before the arrival of the Patriot, the condition of that vessel, the passengers and crew, as well as the vessels which arrived from New Orleans, and elsewhere, the committee are constrained to express their decided conviction, that the malignant fever, which so recently afflicted our town, originated in the numerous causes they have mentioned, favoured by the destructive ravages of the storm and of the subsequent season. The

effects of the change of weather on the 10th of Sept. were very obvious to all. In a few days after the wind changed to the northward, with a clear sky and hot sun; the fever made its appearance in different parts of the town in all its fearful, deadly type. On the 16th, 17th, and 18th, *thirty* persons are reported to have died. Alarm spread through the town, and those who could conveniently, left it. Many, however, remained, and those of the poorer class of people, who either lived in small, crowded, filthy dwellings, or even without any, frequenting the grog shops near the wharves, lodging under the market house, or other places exposed to the damps and vapours of the night. In addition to these circumstances, many of them were intemperate. Among this class of people, which embraces nearly all those who arrived in town from the public works on Mobile bay, the fever was observed to be dreadfully mortal—almost all of them died. Of more than a hundred discharged at those works, who came to Mobile, it is believed that very few are alive. At certain places in town, there was a continual succession of these people arriving and passing to the grave. Regardless, through intemperance, of all the usual cautions for the preservation of health, they were often crowded into rooms with the dying and the dead, till they became themselves the victims of their temerity. We cannot doubt that this class of people greatly increased and spread the disease. The old clothes, bedding, and such like articles, belonging to them, were, after death, thrown into the streets, or back yards, and there suffered to remain to infect the air with their poisonous effluvia.

The want of proper attention, nursing and nourishment, to the sick (which could by no means be had) was a cause, ever to be lamented, of the great mortality attending the disease.

Medical aid, also, was often neglected till the disease had made a mortal progress beyond the power of medicine. In many cases it could not be obtained when desired. Several of the physicians themselves were sick, and the others unable to attend the

numerous calls for their assistance.—Hence, many perished without medicine, or a physician.

The building used for a hospital for the poor was in the centre of the town, and probably contributed to spread wider the disease, and increase its malignity. *Fear*, in many instances, was observed to produce most unfortunate effects upon the patient, and defeated the intended operation of medicine:—Some, in dreadful apprehension of the disease, seemed to abandon hope of life, and sunk in death.

With all these causes for increased prevalence and mortality, the Fever plainly exhibited, in its progress and various symptoms, the most malignant character. The number of those who recovered from an attack, between the 15th of September and 10th of October, the period of its greatest prevalence, was small, though the number cannot be ascertained. After the latter period, as cooler weather advanced, the disease assumed a milder character, and more frequently yielded to the powers of medicine.

In its type and symptoms, it seems to have exhibited no peculiar characteristic marks or effects to distinguish it from the Yellow Fever of other seasons and places, as described by Physicians; unless it be the greater mortality which attended it, and that, it is believed, may be justly attributed to the causes already mentioned. Patients died commonly in one, three, or five days after being taken, with all the symptoms of decided Yellow Fever. In the character of the disease, all the Physicians agreed, but different methods of treating it were practised.

The Committee find difficulty in ascertaining "the extent of the Sickness and Mortality" with arithmetical exactness; although four of their number were continually in town, during the prevalence of the Fever, and two others a considerable portion of the time. For a while the disease seemed to be mostly confined to those employed about the river and wharves, but in a few days after the prevalence of north-winds, and clear, hot sun, (September 10th,) it spread rapidly through the whole town, and from that date seems to

have affected the Creole inhabitants, people of colour, and even slaves. It is also noticed to have been equally mortal with the female, as the male population; though the former might be supposed less exposed to the influence of the general causes of the disease, but they were, perhaps, oftentimes more exposed to the fever in their immediate attendance on the sick. The number of deaths from the 1st of August to the 10th of September, embracing every description of people, was estimated by the Physician, who attended the Hospital, and the greatest number of the poor, and was probably better informed on the subject than any other person, at an average of one a day—40 souls. This may be nearly correct: and of this number it is ascertained that only nine were inhabitants of the town, or embraced in any estimate of our population. These persons are known to have died of various diseases incident to the climate, excepting five or six, who are supposed to have died of Yellow Fever. After the above period, the Fevers assumed the predominant type, and spread death and dismay. From the 10th of September to the termination of the Fever in November, 113 died, (four not of Fever,) making the number of our inhabitants, who probably died of the Malignant Fever, 115. From July 1st, to December 1st, the total number of deaths, including those who died out of town, and those who died by casualties, was 137. The number of boatmen, sailors, workmen discharged from the public works, and transient persons, who died at Mobile, during the latter period named, is supposed, from the best information that can be obtained, to have equalled that of the inhabitants, giving a total of 274.

But to give an adequate idea of "the extent of the sickness and mortality," it seems necessary to notice the population of the town at different periods of its prevalence; and here we must necessarily resort to conjectural estimates. In the month of July, the resident population of the town is estimated at 1300 souls, and on the 10th September, 800; which were, in a few days after the known prevalence of Yellow

Fever, reduced to 500, and it is to be remarked, that a considerable portion of these were in the suburbs of the town, where the Fever did not prevail.

But in a proportional view of the mortality to the population exposed to the disease, the number of our citizens who died of other diseases antecedent to the Fever, boatmen, sailors, and other transient persons, are to be deducted, which would show the loss of our inhabitants by the recent Fever to be 115 ; and affords a proof of its dreadful malignity.

It was observed that the suburbs of the town, at no greater distance than one mile from the rivers, were as healthy, during the prevalence of the Fevers, as more distant parts of the country; and it is not known that the disease was communicated, in any instance, to persons out of the town, by the removal and attendance of the sick. Hence we infer that the disease is only communicable in the atmosphere where it originated; and even there, some predisposing causes appear to have been necessarily existing, as a number of persons frequently in rooms with the sick, the dying and the dead, in circumstances of the greatest exposure, never took the Fever.

Some remarks upon the general state of the country around, in regard to sickness or health, being intimately connected with this subject, as influenced by general and common causes, may not be deemed improper. At New-Orleans, Baton-Rouge, Natchez, and, perhaps, generally upon the Mississippi, as high as the latter place, the same species of Fever seems to have prevailed with great mortality. Natchez and New-Orleans, it is understood, have suffered beyond any former example; and in fact, almost all our cities upon the sea-coast, from Maine to Louisiana, appear to have suffered in a greater or less degree from the same species of Fever; though they were favoured by a long established and well regulated police.

In the interior of the county, upon the waters of the Tombecbe and Alabama, the sickness and mortality was far greater than was ever known before. At St. Stephens, Jackson, Fort Claibrone, and other places on

those rivers, bilious fevers of the worst grade prevailed; and in many instances, we are warranted in saying, that in the type and symptoms it differed little from the fever which prevailed in this town.

The season has been a very uncommon one, and has produced as uncommon effects; and wherever it has operated upon local causes, it appears to have produced malignant fevers. In the town of Mobile, art and labour could scarcely have combined a more destructive mass, for the production of malignant fever, under the operation of such a season, than is found to have been laboriously collected together in filling up lots, streets and wharves; and the committee would do injustice to their own feelings, and their sense of the duty they owe to their fellow-citizens, were they to suppress a warning voice of the danger that yet awaits them, if they be not zealous and active in the removal of the numerous causes of disease, daily trodden under their feet,—daily presented to their view. While they walk the streets, disease will assail them in every quarter; while they slumber in their beds, they will breathe the poison of death, until the yards and enclosures are cleansed—until the streets and wharves are radically reformed; and then, by the blessing of God, we shall prosper in health.

JACOB LUDLOW,
DAVID RUST,
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ADDIN LEWIS,
DR. MAJOR,
EDWARD HALL,
PHILIP M'LOSKEY,
} *Committee.*

Official statement of the Causes of the late Epidemic Yellow Fever, in the City of Baltimore, by the District Medical Society of Maryland, to the Honourable Board of the City Council.

To DAVID BURKE, Esq.
Chairman of the City Council.

DEAR SIR—I enclose the answer of the District Medical and Chirurgical Society, to your Letter, addressed to it, through their President.

JOHN B. CALDWELL, Sec'y.

Baltimore, January 22d, 1820.

The health of our city is a subject full of interest, and in the promotion of this grand object, the most active and zealous co-operation of every citizen is demanded, and more especially of those who have made the preservation of that invaluable blessing the subject of their peculiar study. The society have viewed, with the most anxious solicitude, the recent appearance of the malignant yellow fever amongst us; and since their co-operation has been invited by the constituted authorities of the city, they have embraced the earliest opportunity to deliberate on that momentous subject.

The society cannot help feeling deeply impressed with the magnitude and importance of the trust assigned to them, and in order to meet its responsibilities, they have reflected much; they have listened to every suggestion which an ardent wish for the prosperity of our city could inspire, and have carefully examined every proposition tending either directly or indirectly to establish and perpetuate the general health. The result of their deliberations is respectfully submitted to the consideration of the Mayor and City Council.

The Malignant Fever, which prevailed at Smith's wharf and at Fell's Point, in the summer of 1819, in the opinion of this society, is to be ascribed to the decomposition of vegetable matters. This opinion is sup-

ported by the following facts: The alley back of Smith's wharf has been filled up with dock mud, shavings, and other putrescent materials: The same remarks will apply to the construction of Smith's wharf generally, and also to those parts of the Point where the fever first appeared. It is highly probable that the logs composing the wharves in many places, have contributed by their decomposition to the production of the noxious cause. It is notorious to all who have made any observations on this subject, that the disease raged with more violence along the course of the wharves and the made grounds in their vicinity, than in remote places. A recent inspection of Kerr's wharf and other wharves, has discovered, that from the decay of the facings of the wharf, the water has been admitted, so as to have formed subterraneous pools. These may have found communications with the cellars in the made ground in the vicinity, and may have penetrated to the piles constituting the foundation of the neighbouring houses, and thus have been led up into cellars, which may be the depositories of various putrescible articles. The immense mass of materials just adverted to, are buried from the eye of a superficial observer. These materials have existed, and others have been accumulating for many years. Why have they remained so long dormant? so long innoxious? While the heat of our summer remained moderate, the destructive principle was only partially evolved; but when the intense heat of the last summer penetrated the apparently inoffensive earthy covering, and reached the subjacent mass of perishable materials, they were subjected to a temperature to which they were unaccustomed, a temperature which gave origin to the cause of the disease.

Question as to the efficiency of putrid animal matters producing yellow fever.

The society does not consider the putrefaction of animal matters competent to the production of yellow fever.

Question of the influence of back yards.

The lowness of back yards, especially when they

become the depositories of kitchen offals and vegetable matters, renders them liable to produce yellow fever.

Question of contagion and importation.

The doctrines of contagion and importation receive no countenance from this society:—They believe that the cause of the disease may be imported; by this is understood a cargo of vegetable substances in a putrescent state.

Question as to the influence of habits, modes of living, &c.

The habits, modes of living, &c. of the people in the infected district, did not differ from those of other persons of the same rank or character in other parts of the city, where the disease did not prevail; consequently the disease could not with any propriety be referred to these circumstances as the cause.

When a district is infected, all who breathe the air of that district may be considered as under the impression of the remote cause, (i. e. the noxious air.) The inhalation of this noxious air does not necessarily induce disease.—It is often inhaled with impunity; but when, by irregularity of living, excesses of any kind, want of sustenance, or loss of rest, the system becomes debilitated, the disease is frequently excited, when it might otherwise have been avoided.

Having adverted to the supposed causes of the late epidemic, the following suggestions are respectfully recommended to the attention of your body, as calculated to mitigate the force, if not to prevent the recurrence of the dire calamity, under which a part of our community lately suffered so severely.

1st. In the organization of the Board of Health, it would be important to have at least one medical character, to whose counsel they might refer in all matters touching the health of the city,—having at command an energetic police, vested with full powers to remove persons and property in all cases where the public welfare and safety require it.

2dly. The most prompt attention should be paid to the docks and wharves, more especially to those in the vicinities where the fever first prevailed. The docks

should be cleansed early in the spring, and the mud proceeding therefrom, should, if deposited on the surface, be protected from the sun by a dense coat of clay or other earth. The wharves should be closely inspected, and when perishable and putrescible materials have been deposited in any quantity, they should, if practicable, be removed, or if that cannot be done, a heavy covering of clay should be faithfully applied over the general surface of the wharf, and puddled along the logs down to the water's edge; after which they should have a thick stratum of sand, and be firmly paved, with an elevation in the centre, so as to permit the rain to wash off any impurities which may be deposited on the surface. This, it is presumed, will form a coat so impervious as to resist the transmission of the noxious effluvia. In future, it should be enjoined that all wharves or repairs of wharves should be constructed on the plan of Pratt-Street wharf, with stone facings, descending to, or beneath low-water-mark, so that the logs which support them may be always immersed in water, as under these circumstances they are less liable to decay.

3dly. The streets, lanes and alleys which are unpaved, more especially such as are in the vicinity of the docks, should be well covered with earth and paved—and if putrescent matters abound, they should if possible be dug out and removed. Those already paved, which contain water, should be raised, and a more vigilant attention paid to the sewers and gutters generally.

4thly. Cellars in made grounds should either be prohibited, or the proprietor or occupier should be compelled to keep them dry.

5thly. Heavy penalties should be inflicted on all persons who fill up low, wet grounds, with putrescent materials. All made grounds should be kept dry, either by raising them so as to carry off the water, or by draining them.

6thly. The cove between Town and Point should be improved, wharfed out and filled up as soon as may be practicable. The shores of this cove afford a prolific

soil for the generation of the cause of yellow fever. The space between M'Elderry's dock and Jones' Falls is also in a situation requiring the attention of the corporation.

7thly. It would be highly important to establish a regular and rigorous inspection of back yards, cellars and lots in made grounds, more particularly those near the water, commencing in March and continuing until November.

8thly. Measures should be taken to remove all offals or impurities of any description which may be deposited on the wharves or in the docks.

9thly. The quarantine regulations should be rigidly enforced in all cases where the cargo is damaged or the vessel in a foul state, until a change of condition will safely permit her entrance into port,—but these regulations should not deprive the passengers or crew of the privilege of free communication with the city.

10thly. As the city extends, lots should be purchased, as public squares, to favour the free circulation of air. The planting of trees is recommended generally. For this purpose some of our forest trees, which are highly ornamental, may be introduced; they would afford shade in summer, and prove eminently serviceable in purifying the atmosphere.

11th. It is respectfully recommended that the following laws be repealed; first, that restricting hogs from running at large; secondly, that which makes it penal to throw kitchen offals in the streets.—The propriety of this recommendation is founded on the fact, that hogs destroy vast quantities of such matters, which if suffered to undergo decomposition, might prove pernicious to health. At the same time it is expected that the superintendents of streets will not permit any accumulation of these matters, which may become a source of annoyance to the citizens.

By order of the Society,

ASHTON ALEXANDER, Pres't.

JOHN B. CALDWELL, Sec'ry.

Mons. Lefort's M.D. Essay and Opinion Motivee *on the non-contagion of the disease called the Yellow Fever; as it appeared in Martinique in* 1818, 1819. *Communicated to the Faculty of Paris.*

Translated for the Medical Repository.

I long regarded as contagious, the disease incidental to Europeans, and natives of northern countries, in tropical climates; and as such, I entitled the yellow fever in a memoir on *Contagion*, which was honoured by the Medical Society of Paris at their *meeting of the 6th of February*, 1815.

The inquiries to which I afterwards applied myself; a residence for some time in the United States of America, and the conversations and intimate acquaintance I had with eminent physicians, who had seen and studied the yellow fever in the West Indies and in the United States, concurred insensibly to destroy my belief of its contagion; and at the time when called to my office as physician of the king at this island, in 1818, I was reduced to a state of absolute doubt on this *arduous* question.

Shortly after, I had an opportunity of seeing and studying this terrible disease; and in the space of rather more than a year, during which I had seen, treated and made it my study, I became entirely convinced that *it was not contagious*. The arguments on which I founded my opinion are principally derived from the following considerations.

1st. There is not one example of the yellow fever having been communicated *by contagion* (*) to any patient, convalescent, or person employed in the hospital of Fort Royal, where during one year, from July 1st, 1818, to July 1st, 1819, 667 persons have been treated for that complaint. What! The house physicians, the nurses and overseers, were night

* To prevent any objections to this statement, I should observe, that three of the nurses and the director of our hospital died of the yellow fever in the fall of 1818, and that another nurse was seized with the complaint; these four individuals however were young, of strong constitution, and had come from France. I myself, also, notwithstanding my age, was slightly affected with it.

and day in the wards, constantly exposed to immediate contact with the yellow fever patients; the first especially, who in attending, bleeding, and administering remedies to them, breathed their atmosphere, frequently received the black matter of their vomitings on their clothes and face, and whenever a patient died of the complaint, had the task of examining the intimate folds of their disorganized intestines, and often when in a state of putrefaction. (*) Persons in a a state of convalescence from different complaints, a situation which must naturally render them more susceptible of those morbid causes, whatever they may be, which are supposed to produce contagious diseases, were treated in the same hospital and in the same wards; and yet not one of these individuals caught the yellow fever, whether slightly indisposed, convalescent, or well in health. Is the yellow fever contagious then? If so, how inconsistent must be our idea of contagion!

2dly. In many merchant vessels from France, which arrived at Fort Royal in the fall of 1819, several persons were attacked with the disease without having had any connexion with the other vessels, and before they had communicated with the shore.

I shall cite, among others, the *Fabricius* of Marseilles, which experienced many squalls while beating in the bay of Fort Royal; and on coming to an anchor, half of her crew were attacked with the yellow fever. Whence did they derive the seeds of the disease?

3dly. During the first six months (*le premier semestre*) of 1819, the yellow fever sporadically attacked the troops stationed in the town and arsenal at Fort St. Louis, and also the marines on board of merchant and government vessels, yet neither had had connexion with infected persons, nor did any of them communicate the disease to their comrades.—How did they receive the seeds? and why did they not propagate them?

In fine, human nature (and I take the term in its

* The autopsic examination of those who died of the yellow fever is rigorously prosecuted in the hospital of Fort Royal. We have never tasted the *black matter*, which is usually found in the stomach and gall bladder, and consequently cannot say *what taste it has;* but we have felt it and rubbed it on our hands without experiencing any effect!

most extensive application,) is constitutionally the same in every people on the face of the earth, whatever may be the shade of colour which distinguishes them. Climate, mode of living, customs, and a thousand other different causes, no doubt, produce great modifications; but all these causes united, can never destroy, in one particular nation, or in several nations, a disposition or susceptibility inherent to the constitution of all others: thus it is common to every people known to be susceptible of contracting all complaints evidently contagious, and so every nation is subject to the small pox, the measles, syphilis, the plague, &c. There are no exceptions to the susceptibility of these diseases, but in a few individuals; and these serve to confirm the general rule. This is not the place to say whence these individual exceptions are derived; we have already given our conjectures on the subject elsewhere. It is a fact, that there are such exceptions: there are every where individuals inaccessible to contagious miasmata, just as there are Creoles, as I witnessed last year, who could take the yellow fever.—But admitting that nature allows exceptions from general laws, in bestowing on individuals a virtue capable of repelling the action of a power which affects the whole mass of population, we cannot, without absurdity, attribute the same to a whole nation, or to many nations; for it would be an entire *derogation* from the known laws of physic and physiology. The numerous people who live between the tropics would also be subject to the yellow fever, if it was a contagious disease. They are exempt from it, because their moral and physical system is in harmony with the climate in which they were born: it is to that, and that only, they owe the privilege of exemption; and in the same way it is, that strangers, who have undergone a seasoning to the climate, (if I may be allowed the expression,) weaken or blunt its influence.—When they have spent some years in the colonies, they partake of the privilege of the natives; like them, they are generally exempt from the yellow fever. Such certainly would not be the case, if it was

really a contagious disease; for I repeat, there is no general habit or mode of living which can prevent small pox, syphilis, and other contagious diseases. These arguments, which are weighty, and susceptible of the most extensive developement, are connected with others drawn from the etiology and nature of the yellow fever which, perhaps, hereafter I shall have leisure better to make known. Then, also, we will examine the proofs and facts adduced in favour of the contagiousness of the disease. Those proofs should have the most weight, that are produced by men of the greatest eminence; who have the best opportunities for observation; have long seen the yellow fever in many individuals; and, in fine, made it their study in all its varieties. In many respects, the English and American physicians have much the advantage over those of other countries. Now, among the number of English and Anglo-American physicians, with whom I have been personally acquainted, and have corresponded, I have found very few who believed in the contagion of the yellow fever,—and even they, perhaps, do not now believe what they did 20 years ago. The opinion that it is contagious, may, therefore, be to these physicians and to those who have never seen the disease, rather the result of an error of custom and tradition, than of a true conviction.

Among the French medical *authors* who attribute a contagious property to the yellow fever, some, as Gilbert, Caillot, Bally, &c. have seen the disease, it is true; but have only seen it, as we may say, by stealth, amidst the tumult of camps and the horrors of a civil war; and we may conceive how difficult it is, in such situations, to apply ourselves to inquiries which require study and observation. To the proofs by the above named gentlemen, we may oppose those of a much greater number, who have also written on the yellow fever, and positively deny its contagious character: of whom we need only mention Messrs. Deveze, Dalmas, and Valentin, who have seen and studied the disease, not only in the West Indies, but also in the United States; not during one or two campaigns only,

but for 15 or 20 years. Shall we agree with the authors of the report made to his excellency the minister of the interior, August 17th, 1817; that the point in a question of the contagion or non-contagion of the yellow fever "*is not to regard opinions, nor to appreciate men?*" Certainly not! On the contrary, we believe, that in this case, the number of opinions and the *quality* of proofs should be regarded, and that the appreciation of men who report facts, should always necessarily precede the examination and appreciation of the facts themselves. In holding this principle, which cannot in any way be reasonably disputed, we should say that the question of the contagion of the yellow fever, which is yet pending in some foreign countries, is decided in this place.

I do not know any physicians worthy of the name, in the West Indies, who support or profess a contrary opinion. Dr. Peyre, formerly physician of the king at St. Domingo, and this place, and Dr. Gaubert, now physician of the king at St. Pierre, do not believe in it; and those gentlemen have observed the disease for more than 30 years, on a pretty extensive theatre. Dr. Luzeau, who has been surgeon-general of this colony five years, is equally convinced of its non-contagion. These, assuredly, are authorities which I feel happy to produce, and the weight of which, unprejudiced persons and strangers to the question, must perceive.

Other French physicians of incontestable merit, but who have known the yellow fever only from *report*, and what they have read of it, have, nevertheless, been employed to write upon the subject. A perusal of their works will easily convince us that science and the best abilities cannot always compensate for the want of *ocular observation* and good judgment; nor can the proofs adduced by these physicians, without prejudice be placed in the balance with those we have cited. I do not intend by this observation to censure those, who attribute to the yellow fever a property which it has not. I should have less right so to do than another, as I myself laboured for a long time under the same

error. We are always entitled to regard, when we seek after truth and believe we have found it, although we may be mistaken. Now, the truth here, say the authors of the report before mentioned, is proved by facts; but facts, we have said, have not in themselves, and cannot have the same weight when they bear upon obscure and difficult subjects; because, besides that sense of propriety which induces us to despise every consideration foreign to the truth, or what we believe to be the truth, we must, moreover, to have a claim to veracity, unite two essential conditions, namely, to be well acquainted with the subject in question, and to express it in the most appropriate terms: it is from this strong and mutual connexion of facts with their expression, and from the perfect harmony between a known object and the words which express it, that truth necessarily results. If we deviate from this strict, but just rule in the appreciation of facts, we are liable to be deceived ourselves and draw others into error; yet it cannot be denied that it is very difficult to unite these conditions; and that they have, very evidently, not been united by those who have defended the contagious attributes of the disease. For instance, a fact apparently favourable to it, is that of the French brig *Palinure*, and the English brig *Carnation*. This fact, which is mentioned in the *Dictionaire des Sciences Medicales*, vol. xv. and in the Report of the Professors of the Faculty of Paris, is considered in both those works as *conclusive in favour of the contagious character of the disease.* A physician of this place proposes to publish this fact; and under his pen, it will appear in colours very different from those in which it is represented by Mr. Moreau de Jonnes. As for us, who would fain believe in the veracity of that gentleman, we admit the fact as we have given it, and we say it is conclusive in any thing rather than the contagion of the yellow fever. Let us take Mr. Moreau's own words: in concluding his treatise, he says. "*I discovered that out of* 60 *men on board the Carnation,* 22 *had already died with the epidemic, which they had contrac. l by communication with persons and contact with*

things ;" but this is evidently supposing, and not by any means solving the question. It is a sort of sophistry : *Post hoc, ergo propter hoc.* In good logic, to authorize us to conclude that the English were infected with the yellow fever, because they had communicated with persons diseased with it, it would be necessary that it should previously have been proved that this disease, in certain cases and under certain influences, does not originate spontaneously and without the assistance of a seed ; whereas we have every day examples to the contrary before our eyes, and we have mentioned a very remarkable one in the *Fabricius* of Marseilles.

A long voyage, an obstinate engagement, in which they had been defeated; their humbled pride, their disappointment and the abuse of spirituous liquors, to which they did not scruple to give themselves up on board the French brig, were more than sufficient causes among the English, in a tropical climate, and that too, during the worst season of the year; there were indeed all the elements of the disease incidental to Europeans in these colonies.

To return to the question under examination,—we say, that the opinion contrary to the idea of the contagiousness of the yellow fever, is gaining strength more and more every day, and there is every reason to hope it will become uninterruptedly general : then we hope the question of the contagion or non-contagion will be treated and decided differently from what it is in the report presented to the government ;* then also will cease, on their part, those vigorous measures hitherto judged necessary to preserve the public health from the dangers of a dreadful scourge. Yet with all deference which we owe to their authority, we must say that the measures hitherto taken are not all in harmony with incontastable observation. It is a fact, indeed, 1st, that beyond the 40th degree of latitude the yellow fever never appears at a temperature below 20° (Reaumur—77° Fahrenheit) and 2dly, this disease has never yet been seen beyond the 46th de-

* The report to the minister of the interior already quoted.

gree of latitude. Even then, on the hypothesis of contagion, there is nothing to fear from it beyond the 40th degree of latitude, nor any where else where the thermometer does not rise above 15° (Fahrenheit 65 3-4.°) It is upon this base, that a neighbouring nation, whose connexions with the West Indies and the United States are much more frequent and extensive than those of France, has founded its quarantine system. Vessels coming from the West Indies or the United States, that have undergone a 10 or 20 days' quarantine at Havre, have but to pass the channel to be admitted to a free communication. Such, at least, has been the practice, and which I witnessed in the month of November, 1817. All vessels which arrived at that time from the United States, performed a ten days' quarantine at Havre; there was frost there at the time, and there was frost also in many ports of the United States, when those vessels sailed. To this simple remark I confine myself at present, and leave to my readers the task of drawing the inference.

Fort Royal, Martinique, August 1st, 1819.

EXTRACT

From the instructions, sanctioned by the Government of the island of Cuba, for the preservation of health among new settlers, and prevention of malignant epidemic fevers. (Translated for the Medical Repository.)

This important document describes different healthy places and ports; such as *Matanzas, Nuevitas, Cuba, and Trinidad;* where national and foreign colonists are invited to settle, under certain concessions, or to remain a sufficient length of time to become seasoned to the climate, &c. To this, the following directions are subjoined.

"The most favourable season for new-comers to this island, is from October to February, when the heat of the weather is rarely excessive, and the rains very moderate. The labouring class of people, who

prefer to settle on the sea-board, will meet with a climate scarcely different from that to which they have been accustomed, and will be, therefore, better able to attend to their respective avocations, especially that of breaking, clearing, and tilling new lands. In other situations they would encounter continued hot weather, which, under the tropics, frequently exhausts the ordinary strength, while it rapidly forms exhalations from masses of putrid vegetable substances, which are here and there accumulated by heavy storms of rain.

"It will be a wholesome practice for the colonists to open wells, and dig ditches on the boundaries of their land, which will procure the double advantage of draining the stagnant putrid water, which never fails to generate dangerous fevers, and of marking the limits of their property.

"In soils that are muddy and swampy, they should, as far as possible, select the most elevated ground for their houses, and never plant trees around them, which might obstruct the free circulation of air. Again, as the sea-breezes are cooling and wholesome, all the year round, and the south winds uncomfortable and pernicious, it should be a rule to have dwellings so situated, as to be benefited by the former, and sheltered against the latter. These should also be kept clean; and every body besides must habitually cherish neatness and ease in their person and clothing.

"Those who are of a plethoric constitution; have a florid complexion; red or suffused eyes; are subject to head-ache; and by short labour soon become wearied and feel debilitated, should have recourse to repeated venesection, and abstain from labour under the heat of the sun. In the morning, they should refresh themselves with a draught of diluted lemon, orange, or tamarind juice, and in the evening, bathe in river water. But, if of a contrary constitution, subject, in the morning, to have a thick and scurfy tongue, bitter taste, loss of appetite, sick stomach and indigestion, they must abstain from acid drinks and fruits, and take laxative medicines or an emetic.

"The people thus addressed are warned, that in

town, or in the country, they must live frugally, drink little wine, and only at their meals, if used to it; as for spirituous liquors, they must entertain much diffidence, and use still greater privation; although, after a fatiguing day's work, during hot weather, it is better to drink a small quantity of the same, mixed with water, than to drink the latter pure and very cold: nor could it be supported with impunity, if, when the body is heated by labour or violent exercise, one should bathe in cold water, or remain some time exposed to rain, or should sleep in a cold, damp place, and night air.

"In every country, health is preserved by a proportionate degree of temperance and frugality in living, a proper share of exercise, and rest after labour, peace and tranquillity of mind, moderation in the enjoyment of pleasure, and a regulation of all physical or moral causes, that can impair the human constitution. Attention to these restrictions becomes still more necessary in countries, where the European (and *North American*) is submitted to new and different agencies from those to which he has been accustomed. Let it be added, as a more powerful motive for adopting, in a tropical climate, a well-regulated and careful mode of life, that a frequent occurrence takes place, there, of morbid causes in the air, great heat, excessive moisture, deleterious vapours or gases from the surface of the earth, or from materials incessantly exposed to putrid fermentation.

"To these, wise men should oppose every caution and preservative mean, that can protect life against disease, or render its attacks less dangerous and more remediable. In proof of this, we will relate the happy effects of precautionary measures lately witnessed in this island.

"A choice of about 70 men was made in the latter end of August, 1819, from the troops, which had been sent to this island, to complete our corps of light horse, (*dragones de America.*)—They were kept all together in an airy and insulated building, in the suburbs of Havana, where they were subjected to the following

rules: At 5 in the morning they were directed to bathe in the sea; after breakfast, they were left to their occupations of cleaning arms, horse equipments, &c. at 11, they were to take a cooling draught of tamarind water, with which they dispensed, if indisposed. Their dinner was wholesome and frugal, after which, they were allowed to walk about the barracks and suburbs till sundown, every ten men being under the attendance of a sergeant, who watched over them, and did not permit them to stop at any tavern or improper place. They then retired, and partook of a *gazpacho* for their supper.* It is a fact, that, after two months of this keeping, very few of these men had contracted any disease, or but slight indisposition; not one of them died, and they were all able to do duty."

THOS. ROMAY.

Havana, November 20, 1819.

REMARKS.

The reading of this judicious instruction, by the government of Cuba, to foreign visiters and settlers, presents a striking contrast to our adopted modes of guarding against the diffusion of malignant diseases, from people whose improvements we comparatively underrate, in matters of public welfare. Here is not a word of lazaretto, quarantine, nor of those restrictions, without which, our authorities suppose that yellow fever must propagate itself, and make new victims. It may be said, however, that the above prudent and additional measures, for the preservation of health in the island of Cuba, do not invalidate the established opinion of that government on the subject of contagion, as, during the greater part of the year, they exact severe quarantine from American vessels. This is true,—and so will they do, at least in commercial retaliation, as long as the quarantine laws of northern

* The *gazpacho* is an ordinary meal, in the evening, for the lower sort of people in Spain, as the *olla podrida* is for the better class, at dinner, although different in its composition; for it is simply a salad of lettuce, tomatoes, and other vegetables, abundantly made up with pepper, salt, vinegar, and oil.

nations shall be established upon the principle that the West Indies are exclusively the native soil of yellow fever, and that it is importable to their own country. But, a stronger evidence that the enlightened and thinking class of the population of that country do not entertain such an opinion, is the promulgated authority given by the royal tribunal of the faculty, called *protomedicato*, to publish a treatise on the yellow fever, by Dr. *Marcus Sanchez Rubio*, wholly predicated on the local origin and non-contagion of that epidemic. In mentioning this work, we must not omit to class it among the most learned and instructive of the kind, although we would not implicitly admit the ingenious theory of *animalized* waters, which this author represents as the principal source of malignant bilious fevers. We may also subjoin another document, from an equally impartial and experienced judge, who, it is presumed, would not set himself against the opinions of the government under which he resides as an adopted citizen, and receiving from them much respect and confidence.

To N—— C——, M. D., &c.*

Havana, December 18th, 1819.

Sir,

Your request of me to give you my opinion, "whether I conceive the fever of tropical climates, commonly called yellow fever, to be contagious or not," I shall most cheerfully comply with. Preparatory however, to giving you some facts on this subject, I reply, that I most religiously believe it to be non-contagious.

As facts are the surest data on which to found so interesting an opinion for the public weal, I shall relate to you a few that have occurred to me in this city, which were taken promiscuously from my note-book; and which I believe will carry with them some weight in

* The person here designated is a physician officially engaged by an European government to collect information and documents on the subject of the West-India malignant fever.—*Editor.*

proving the non-contagious character of the fever now under consideration.

Mr. Jacob Pinder, a Russian by birth, aged about 21 years, and a new-comer, was attacked by the yellow fever about the 31st of May, 1818, and died at half past 12 o'clock, A. M. of the 4th of June, under all the aggravated symptoms of this fever; such as singultus and black vomiting. After his death, he was laid out as usual, in the same room where he had been sick. The family of the house then retired to rest. Francis B. Wallis, Esq. a very particular friend of Mr. P. ordered his cot into the room where the corpse lay, shut the door and went to sleep with only the windows of the room open. On the 4th and 5th of June the thermometer (Fahrenheit's,) ranged from 80° to 83° with rainy weather, and light close Southerly winds. Mr. Wallis had been so assiduous in his attentions to Mr. Pinder during his sickness, both by day and at night, (he being sick in Mr. W.'s own apartment) and as Mr. W. had himself but just recovered from a previous indisposition, immediately preceding Mr. P.'s attack of the fever, it increased his debility, owing to his subsequent exertions and want of sleep: for he always assisted him in and out of bed from the close-stool; and was particularly attentive in holding his head when he vomited.

From these causes Mr. Wallis slept soundly, until six o'clock in the morning; and when he awoke, he found the corpse very offensive, in consequence of purgation, &c. At ten o'clock of the same day, Mr. Pinder was interred, and the corpse was uncommonly putrid and fetid, as was observed by all who attended the interment. Mr. Wallis's room was washed and aired, only the same day, and he slept in it on the following night, and continued to sleep in it for several weeks after, without any injury to his health!

Other circumstances are worthy of notice, in addition to the particulars above written, as it relates to Mr. Pinder's case.

It must be recollected, that Mr. Pinder died in the house of Senora Benite Cooley, who after Mr. P.'s death

would not permit any of his body or bed linen that were in use during his illness to be washed; preferring instead of burying them or throwing them into the sea, to tie them into a bundle and throw them, together with the mattrass and sacking bottom of the cot, on the top of a low house in the back of the yard, under which was the kitchen for cooking and washing; the sleeping rooms for the negroes, and the stable for mules.

Mr. Wallis informs me he asked Mrs. Cooley the following questions. Suppose Mr. P. had recovered of vomito prieto (as the Spaniards call black vomit) would you not then have allowed his clothes to be washed in your house? She applied in the affirmative—but as he died, it could not be allowed! But, says Mr. W. are you not afraid that these clothes, the mattress, &c. laying on this low house so near your parlour and your negro rooms, and there to rot in these alternate rains and hot sun, will contaminate the surrounding air, and give you *all* the vomito? No, replies Mrs. C. rotten things on the top of a house or before the house in the street, cannot infect the inside!

In the hurry of the negroes to clear the room after Mr. P.'s death, several of Mr. Wallis's clothes were tied up in this same bundle then on the house; and as Mr. W. did not believe in Mrs. C.'s nonsense, he ordered the negroes to bring the bundle into the yard, for he would not lose his clothes in such a foolish manner; although Mr. Pinder had used several of them during his sickness, particularly handkerchiefs—to be sure, there had been a few showers of rain on them previously, as well as hot sun; but Mr. W. was not to be intimidated at that. The negroes tumbled the clothes with a long pole from the roof and then presented the bundle to Mr. W. on the end of this pole, as though it had been poison. Mr. W. very readily opened it; took out those things he recognized to be his own; tied up the bundle containing the rest, although wet and offensive, and returned the remainder to the negroes, who placed them on the house again with their pole, where they remained until they decayed. Mr. W. sent those things he took from the bundle to

his wash-woman, who washed them, without injury to herself or to those about her.

No person that I ever heard of sickened in consequence of attending Mr. Pinder during his illness or his funeral. Mr. W. continued in his usual health, until he left the Island two months afterward: as well as Mrs. Cooley and family and her neighbours.

A few days subsequent to the death of Mr. Pinder, the funerals of Doctor Christie and Mr. John Ross, jun. were solemnized. Both these young gentlemen were Scotchmen, strangers to the climate, and were from twenty to twenty-four years of age; both of whom also died of the yellow fever. The corpses of these two gentlemen were also peculiarly offensive, although interred as soon as possible after their decease. Dr. Christie's corpse was placed in the Cathedral Church to solemnize the obsequies, and it was so very offensive that the Rev. Clergy could not get through with the ceremony, and they requested that the corpse should be removed for interment, before the church ceremonies were half finished, promising to finish them afterward.

None of the Physicians, Priests, Nurses, Visiters, &c. who visited these young gentlemen during either their illness or interment, did sicken in consequence.

I have been a resident practitioner of medicine in this city and at Demarara for fourteen years; I have been in the service of the United States Navy as Surgeon; one year of which time, we were stationed on the coast of Surinam. At these different places, I have had many opportunities of making observations, as to the contagious character of the yellow fever; and I have never in a single instance been able to trace it, as originating from any communication with the sick; or from personal contact with another person sick of the same malady; always ascribing its origin to local causes; such as peculiarities of climate, miasms, &c.

For further ideas of mine, as it respects the causes of yellow fever in inter-tropical climates; I refer you to the New-York Medical Repository, second Hexade vol. VI. p. 209 et seq.—and to the same work, new se-

ries, vol. II. eighteenth from the beginning; page 369, et seq.

Wishing you every success in your laudable, but arduous undertaking, I remain, dear Sir, with great respect, your obedient humble servant,

WILLIAM FROST.

Desultory Remarks on Hydrophobic Rabies, concluded from page 142 *of this volume.* By FELIX PASCALIS, M. D. *Corresponding Member of the Medical Societies of Paris, Marseilles, &c. Member of the State and County Medical Societies of New-York, &c.*

I HAVE said that the rabific poison should be defined *a virulent animal matter, self-engendered under the agency of morbid causes, and communicable, by contact, to other animals, men or beasts.*

If this definition is comprehensive and correct, it will safely guide our inquiries into effectual means for the prevention and cure of canine rabies. This task I have promised to undertake, and I hope that my views may be of some service to mankind.

It is important, at first, to remove, if possible, a strong scepticism generally prevailing on almost all questions connected with this subject among speculative writers, as well as practical observers, who seem to think that this terrific malady has, to this day, remained incurable. The consequence is, that, disregarding important points of doctrine, which can lead to some useful remedies, they more readily trust upon equivocal recommendation, to new antidotes, or to fashionable nostrums, even with great hazard of many lives; for if this way of experimenting be erroneous, it cannot be accomplished without sacrificing many victims: thus, we have seen that an unfounded belief of the antidotal virtues of an American plant, called *scutellaria lateriflora*, derived from a doubtful and empirical testimony, has, within a few months, been attended in New-York and its vicinity with two deaths, for which there can

be no excuse nor sufficient reason to account for in any other way.*

This scepticism, we confess, is not always the result of ignorance, nor of want of medical skill on the part of the practitioners, although the canine disease does not frequently fall under their observation, but is greatly owing to the obscure and mysterious nature of the questions to which we have alluded. Better to show that however interesting they may be, they have no connexion with the best mode of treatment which is to be adhered to. I will enumerate some of the most prominent, and add a few of my own remarks.

I. It has been seriouslycontended that the rabific poison had no reality; that it was not a specific virus, and only a peculiar form of disease, which like tetanus might be the combined result of injury on tendons and certain

* Our fellow citizens have heard enough of the two cases here alluded to; but for the sake of our distant readers, we subjoin the principal circumstances of their seizure, with the seeds of the disorder, treatment, and fatal issue.

James Cann, a respectable mechanic in this city, and a man of family, was, on the 10th of June, 1819, bitten on the left hand by a dog well ascertained to have been mad: on the 17th, he showed some convulsive symptoms on the face and head, but no dread of water: he seemingly recovered, while he was under the daily and remedial use of scullcap; no surgical treatment was applied to his hand. Having resumed his laborious occupations, he was of course thought to be perfectly free from canine rabies until the 3d of February, 1820, when he experienced the usual premonitory symptoms from the bitten hand along the arm, &c; was seized with dread of water: he was again served with a great abundance of scullcap, in every way that he could possibly take it: he died five days after, being exhausted by the successive paroxysms of raging madness and convulsions.

The other fact, and in our vicinity, we find thus related in the *Columbian*, an evening paper of this city, of March 29th.

NEWARK, March 28.

"*Hydrophobia.*—An affecting case of this dreadful malady has occurred in this vicinity. On the 17th of January last, Thomas Palmer, a young man in the employ of Joseph Pierson, Esq. at South Orange, was bitten by a dog supposed to be mad. As a precautionary step, he went immediately to New-York and procured the *scullcap*, which has been supposed to be a sovereign remedy for this dreadful poison.—We are informed he made a free use of this herb, and accommodated his diet to the directions prescribed in a pamphlet which treats on the subject. No ill effects were felt, or any complaints made till Friday the 17th inst. when a slight pain was experinced in the shoulder, which gradually extended, the two following days. On Monday afternoon, the 21st, the family in which he lived for the first became seriously alarmed,—and it was soon ascertained to be a distinct case of the hydrophobia. Two or three physicians were called in, but their skill was unavailing,—the disease progressed, and he died on Thursday evening last, greatly distressed in mind as well as body. He was aged 22 years, and has a mother living ten miles above Albany."

membranes; likewise that resembling hysteria and many consulsive diseases, it may have originated in a morbid condition of the nerves, &c.*

A decisive refutation of this theory was offered in the experiment of Messrs. Magendie and Dupuytren, which we have mentioned, and who inserted the slaver of a dying rabid patient into the skin of two dogs, one of which shortly after manifested the same disease, and died with it.

For a further consideration of this question, let me be permitted to ask, why is it that our books of surgery never have recorded an instance of injury to tendons or nerves by gun-shot or otherwise, which produced any symptoms of canine madness?

II. The spontaneous formation of rabies among wild or domestic animals, under certain circumstances, or from deleterious food; also from deep sorrow and other passions in the human breast, has been admitted by many, against the opinion of its exclusive origin from the canine race. Among the supporters of the last, Dr. Samuel A. Bardsley of Manchester is certainly the most plausible antagonist; he so far exclusively adopts a *unique* source of this poison, that he concludes by recommending a system of quarantine for dogs, better to extirpate canine madness from the British Isles. Many recorded cases of protracted existence of the poison in the human system, from a year up to forty, were examined critically and invalidated by him, that they should not be adduced as proofs of spontaneous formation of canine rabies. He admits, besides, that hydrophobia has frequently existed independently and distinctly from the rabid disease. Bardsley, I am sorry to say, had never heard of an instance of its unexampled and sudden appearance as an epidemic, (second number of this volume,) and as it occurred, a few years ago, in a province of Peru, among various species

*The ingenuity of two French physicians, Messrs. Bonsquillon and Girard, has been much exercised upon the affirmative of this hypothesis, and I apprehend with no manner of utility for the preservation of mankind.

of animals, and during an excessively hot summer; nor has he paid sufficient attention to the inconsistency of supposing a poison exclusively originating from one species of the brute creation, and yet communicable to all kinds of living bodies, while it is ascertained, that in many countries under the tropics, and in both hemispheres, especially in Arabia, Persia, Turkey, Egypt, &c. hydrophobic rabies has been totally unknown for many centuries. We therefore feel contented to infer with the editors of the *Dictionnaire des Sciences Medicales*, that both sources of spontaneous formation and of communication by contact are equally admissible, (vid. *Dictionnaire, &c. vol.* xxii. *letter* H. *Hydrophobia*.

III. A third question, which more than others is calculated to establish doubts on any kind of preventive method of treatment, is the incertitude of the periods or stages of the malady and of its operation on the human system. Thus, if among many occurrences of persons bitten by the same rabid animal, it is considered that a great proportion of them did not receive the poison, and that others, who were treated by arbitrary and insufficient remedies, did not suffer its fatal effects after a great length of time, it must follow, that whatever means have been used will not fail being immediately recommended by the preservation of those in whom the canine virus did not exist, and of those in whom it will remain inactive for many succeeding months or even years. In consequence of our incertitude of the duration of this period, we are thus placed in an irresoluble obscurity respecting the true power and efficacy of the remedies used.

Moseley has endeavoured to find some data on this subject, from the evidence of 28 well-known cases; but he has only better ascertained the diversity of periods from three days to eight months, after the date of the bite, and we have read and heard of still more protracted intermission, from one year to twelve, twenty, and forty. Bardsley himself, who, as before mentioned, had contended against the spontaneous for-

mation of hydrophobic rabies, had candidly acknowledged the genuineness of the symptoms of *John Lindsay* of Lancaster, in England, twelve years after he had been bitten by a large mad dog. Be it as it may, if we cannot account for the immense disproportion of the *forming* periods of Hydrophobic rabies, as we can of any other contagious disorder, we must, at least, acknowledge that its latent and inert continuance in the human system for a long series of years, is not an unparalleled phenomenon, if we conceive that such a terrible destructive element of animal life may be compared to those minerals or metallic poisons which are inert and innocuous by themselves, until, by the intervention of aerial principles, they are rendered highly deleterious ; until then they cannot be considered but as heterogeneous and innocuous substances, which it is not rare to find confined in human flesh and bones. And who has not seen various colouring matters introduced under the epidermis, and on the *rete mucosum*, remain indelible during life, unless this is taken off by excision ?*

Nor is our want of knowledge of the semeiology or operation of the canine virus on the human system, an objection or insurmountable barrier to the reasonable inductions we may obtain for its prevention. It bursts, it is true, from a dormant state, like the devouring Grecian fire, and invades at once the primary organs of life, the heart, the stomach, the brain ; shakes and convulses the whole frame, perverts all natural propensions, transforms human kindness into a ferocious instinct; and this most cruel conflict against a consuming fire, or an impending suffocation and tearing sensations, is thus continued until life is miserably exhausted. Again, the careful examination by the scalpel, after

* The *tattooing* of numerous denominations of savages is not less in point, to prove the harmless and durable impregnation of human flesh and skin with certain colouring matters, than the *tattooing* of the Christians in many parts of the world, especially among the seafaring class of people. These seldom dispense with it from religious or patriotic motives, and can show on their arms and breasts the indelible red or blue emblems they have chosen to be *tatooed* with.

death, of the causes of such ravages, has not yet shown to us the vestiges or the organic track of the poison, nor greater alterations than those which the violence of the paroxysms must have produced. Let us, however, remark, that this invisible agent has always been felt by the sufferer as originating from the bitten part,* and that on the sound and well-formed scar of the former wound, slight marks of inflammation are generally perceivable at this last awful crisis. In this labyrinth, therefore, there still remains a thread to extricate ourselves from a despondent rejection of a timely and judicious practice. This subject, besides, is not the only one in medicine which has been subjected to its dominion by comparative experiments without explanation or definition of its etiology. Who can account for *ague and fever* at a high degree of animal heat? for *Chorea Sancti Viti* against the operations of the voluntary muscles? for the erroneous sensation in *Hysteria?* for the profusely created saccharine fluids of *diabetes?* for the violent contractions of tendons and muscles in tetanus? and for the innumerable colours and forms of periodical *exanthemata?* yet all these, and other obscure diseases, have yielded at last to analytical indications and remedial experiments. The alleged failure in the treatment of hydrophobic rabies is also frequently derived from the fatal period which terminates it, and which is comparable to the last operation of a poisonous draught long retained in the stomach. An eminent modern physician nevertheless has successfully applied his best endeavours at this awful stage;† and it remains a solemn duty to us to persevere in the use of means which Providence and human wisdom have placed in our hands.

There are many other controvertible questions relative to hydrophobia; is it a disease distinct from *canine madness?* is its *contagious* attribute exclusively placed in the slaver of rabid animals or transmissible by their effluvia, or by their flesh and meat used as *ordinary*

* The same we have seen on the hand of the unfortunate Jas. Cann. We were told also, by one of the attending physicians, that since the original bite, he had frequently noticed some slight appearances of it.

† Vid. Moseley on Hydrophobia, London, fourth Edition, 1813.

food? Can a rabid disease be formed by mental irritation, and from terror after the bite inflicted by dogs which either recovered or remained free from it? In fine, is there any confidence to be placed in the prevention or cure by *snake stones*, by the *Ormskirk* and *Tonquin* remedies, by *galvinism*, *by hydrochlorine*, *&c.* especially by herbs, such as the *anagalis arvensis*, the *scutellaria lateriflora*,—the *alisma plantago*, and what not? These, and many other interesting subjects, would much exceed the time and space appropriated to more important matters in these our pages. These numerous, "fashionable specifics," as Dr. Thacher calls them, "are the bequest of ancient family secrets, and the refuge of quackery and ignorance." (Page 232.) I must candidly lament that any of them should ever have seriously employed the patient labour and time of many physicians and worthy writers. Their philanthrophy, it is true, should always claim great respect. But, alas! this amiable attribute alone cannot in this respect in any way serve the cause of science or of medicine, and much less that of humanity, unless it was cautiously directed by sound judgment and by analytical evidence. That neither have yet vindicated one single antidote against canine rabies, we are satisfied. We furthermore refer our readers to the remarks on the subject of the American specific in the last Philadelphia Medical Recorder, page 267. We next come to the medical treatment of canine rabies, which embraces two indications.

First, that of promptly destroying or abstracting the rabific poison from the bitten parts, and of rendering it the seat of an abundant suppuration, if not practicable of recurring to the excision of the same.—The second indication is to expel any possibly diffused virus into the system, by an appropriate *alterative treatment.* I add, that from an attentive perusal of very numerous authorities and cases, it appears, that the fulfilment of the first indication alone has proved sufficiently preservative in many cases; but by no means in the greater number: The second without the first is exceptionable; but both simultaneously applied.

have been successful and effectual in the ratio of 30 to one.

Before we proceed any farther, let us be permitted to lay before our readers a recent document from an experienced hunter in India, who, without much theory or science, and while he had his business, his pleasure, and his own life principally at stake, might claim, with his good sense and presence of mind, the right of guiding our researches. We esteem his authority, because it comes without medical pretension, and may be less objectionable to those modern empirics, who have supposed that the science of medicine neither possesses nor has a better right than they have themselves to decide what is best to be done against this dreadful disorder. The following is an extract from a letter by Dr. Johnson to Dr. James Johnson, editor of the Medico Chirugical Journal, for April, 1819, (page 494, &c.)

"Having passed all the middle part of life in India, a country by no means friendly to European constitutions, particularly to those who, like myself, were impatient of confinement, and regardless of the climate, I am now suffering from its baleful influence, with little expectation of relief. To amuse the tedious hours of a sick room, then, I shall take up my pen, occasionally, to communicate to the author of the "Influence of Tropical Climates on European Constitutions," (a work which needs no encomiums from me) such observations as my long residence in India has enabled me to make; with the hope that they may prove useful to my countrymen in that distant quarter of the globe, especially when promulgated through the medium of Dr. Johnson's writings, which must have an extensive circulation between the tropics.

"The subject of this my first paper is Hydrophobia, a dreadful disease. The number of persons bitten by mad dogs and mad jackals, that came under my care, while at Chittrah, (Rhumghur,) would appear almost incredible, were they to be stated here.

"In *every instance* where I had time or permission to impregnate the system with mercury after the infliction of the bite, and before the symptoms of hydrophobia

showed themselves, the latter were entirely prevented. If it be feared that I may have been deceived on this point, I hope to dissipate such fears, by stating, that not a year passed at the station abovementioned, in which I had not numbers to attend to, *bitten by the same animal.*

"Of these there were some who, from religious prejudices, would not submit to the course of medicine I prescribed, preferring the prayers of the Brahmin priest. *These* regularly perished by the disease, while the others, bitten by the same animal, and at the same period of time, were invariably preserved from hydrophobia, where salivation was induced. This, which I think may be fairly called the *experimentum crucis*, I have put to the test so often, with the same identical result, that not a shadow of doubt remains on my mind relative to the entire efficacy of the prophylactic. The proofs, indeed, are positive, negative, and comparative; and I leave it to the consideration of the profession at large, and especially of those employed in our Indian territories, where the occurrence of hydrophobia is so frequent, whether or not to adopt a preventive measure which offers so certain a check to this most dreadful of all diseases. Neither salivation nor any other remedy has ever, in my experience, arrested the disease, when once it had commenced its destructive career.

"It often happens that mad dogs or jackals get into the kennels or dog houses in India, and sometimes even mingle with the dogs in the field while sporting. This is when they are in the first stage of madness, and they will then go considerably out of their way to attack and bite all that come in their sight. In such cases a general examination must be made, and every dog that bears the least mark of scratch or bite must be put to death. Even this precaution does not always ensure perfect safety, as the following, selected from several other facts, will tend to show. While I was coursing one day with a leash of greyhounds and four or five terriers, a jackal appeared at a considerable distance on a plain. The greyhounds were slipped; the dogs saw the animal, and immediately made direct for

him. To my great surprise, the jackal, instead of making off, ran straight towards the dogs, and I soon discovered that he was raging mad. It was impossible to separate them till they had killed him. I went immediately home, had all the dogs washed, and examined them myself in the most minute manner. I found four favourite dogs bitten, and these were instantly hanged. The others, having no marks of the least scratch, I considered as safe. About three weeks afterwards, however, on my march to Calcutta, my dog-keeper came running up to my tent, one day, crying aloud, and at the same time keeping three terriers, as well as he could, at arm's length, they making all possible efforts to bite him. As soon as he approached, I saw, by their erect hair, like bristles, inflamed eyes, and foaming mouths, that they were mad; I therefore directed the poor fellow to twist their cords round a tree, which he dexterously effected, and then I caused them to be despatched with a wooden mallet, used for driving the tent pins. The dog-keeper was bitten in at least twenty places; some of them trifling, others large bites. To the whole of these I applied lunar caustic, and put him into a salivation as quickly as I could. The ptyalism was kept up for fourteen or fifteen days. He lived with me several years afterwards, and remained in perfect health."

It appears, from analogy, that the destruction of the rabific virus, when deposited in the bitten parts, can be as easily effected, *cæteris paribus*, as in any case of inoculation of small pox, of vaccine, and even of syphilis, were we, with timely caustic or excision, to cause a suppurative disease in the part infected. It is also well ascertained indeed, that hemorrhage, from parts contaminated, will prevent the infection of the above specific diseases, (vide Med. Repos. vol. viii. page 35.) The probability of preventing the infection it still greater in rabies, because the virus remains longer dormant in the bitten part than any other specific poison, which never remains inactive more than one or two weeks. The importance of remedying to this dreadful inlet of canine virus is more evidently evinced by the corresponding irritation or sympathy, which, after long periods of time, is still renewed during the

fatal paroxysm, between the præcordia, the chest, and the bitten parts, which in most cases present marks of inflammation, and from which certain painful sensations are incessantly shooting along the limb up to the thoracic muscles or viscera. This phenomenon, which has been long observed, and is universally acknowledged, has, no doubt, suggested the propriety of using violent means for the destruction of the poison in its bud, such as boiling oil and butter of antimony, to be poured into the wound of the afflicted. This mode was recommended by Celsus, Galen, and some of the most ancient Arabian physicians: Since the practice of either excision or cauterization of the bitten parts has been authorized by the schools of medicine of civilized nations, and with more or less confidence in its efficacy, and various modifications or improvements, it has been handed down to us as an indispensable prophylactic: it appears, nevertheless, that its efficacy depends upon the abundant and continued suppuration which is induced in the wound, which has thus been either dilated by the knife or enlarged by caustic. To this circumstance Dr. Fothergill attributed the remarkable cure of the servant woman of *Bellami de Holbern*, who died under his care from the effects of rabies. She had been more severely bitten by a mad cat than her master! but the wound of the latter was very soon healed, and that of the former was long kept open, like a running ulcer, by a surgeon to whom she applied for relief. To this circumstance the above eminent physician ascribed her preservation. In the same manner Galen (de Sect. cap. x.) gives the greatest encomium to the protracted suppuration, and proves it by the case of two men bitten by a mad dog; the wound of the one being long kept open, was attended with preservation; that of the other, whose surgeon hastened to heal up the tearing of the bite, terminated fatally! These successful modes of prevention are authoritative, as we are not informed that any other mode of treatment, mercurial or otherwise, had been thought necessary, or recurred to, better to counteract the poison.

The ancients were more partial to the burning of

the bitten surfaces or parts with a red hot iron.* In succeeding ages, gunpowder has been used, or pure potash, aqua-fortis, nitrate of silver, arsenic, Spanish flies, and what not.† With any of these, the ablutions of the wound by cold water or by alkalies, by lime, and lately of hydrochlore, or what the French call *acide muriatique oxigené aqueux*, with which the bitten parts or the wounds must be washed, and which also may be given internally, have been recommended.

It is neither my intention here to establish what mode is best, or a more powerful destroyer of the canine virus in the wound; nor would I wish to controvert the additional efficacy of many auxiliary detergent liquids, highly recommended by recent writers.

But it is obvious, that, in various circumstances of wounds superficial, or deeply inflicted in more or less dangerous parts, a physician, assisted by a good surgeon, should be the best judge of the necessary materials to be employed, when a perfect excision is not practicable or preferable. Burning with fire, cutting or dissecting with a scalpel, and all sorts of cauterization, have each a peculiar and different mode of action; the choice of which is to be regulated accordingly, provided it will answer the indispensable indication of a prompt effect and of promoting a laudable suppuration. The pure potash, diluted with soap suds, rapidly penetrates to a great depth, but the eschar, or part destroyed by it, is so long in sloughing off, that it would always be better to cut it out. There is danger in passing a knife from the part contaminated into that which is sound. As a caustic, the nitrate of silver daily applied, brings on suppuration, and I imagine must be suitable in a great variety of cases. Whatever chemical or other violent means are employed, let the physician or surgeon have in mind, that nothing is more dangerous than what, in fact, would be worse than the wound itself left in its first condition, that is, a state of continued irritation, which

*Ruffus Ephes. Galen, Ætius, and Van Swieten, (Comm. Boerck. aphor. 1142.)

† The plaster of tarenta, consisting of Diach. 1 oz. Canth. 1-2 oz. ss. arsenic. 1 drach. Corros. Sublim. 1 drach.

overcoming the energy of the nervous system, might retard a salutary reaction and suppuration, or establish an inverse or *centripete* action, during which the rabific poison would be more rapidly absorbed into the system. I do not doubt that to this cause only we must ascribe many recorded failures of the surgical prophylactics; and that any experienced surgeon, who may read these remarks, will understand what I mean, better than I could express it. Great attention, therefore, is incessantly to be paid, both to the state of the wound and of the constitution, to keep up a healthy excitement, with a moderate degree of fever, covering the injured parts with a soothing, warm, and gently stimulating cataplasm. I would apply the same degree of caution to the ablutions proposed and before mentioned, which, as detergents, I feel satisfied cannot be more effective than a prompt and laudable suppuration, nor even than a hemorrhage which should not endanger life. Besides its beneficial effect, already mentioned in cases of specific virus, let me observe, that large wounds by mad animals are less dangerous than small ones; for to the first, there always succeeds either hemorrhage or suppuration, "*quippè e majori vulnere, confertim copiosus sanguis manat; quod minoribus non accidit.*" (Palmarius de morsu canis, page 273.) Cold or stimulant ablutions, I conceive, might overcome the power of nature, to establish that suppuration, which it is so important to create, and without which the surgical mode of treatment would prove abortive.

The following rules, with respect to the surgical prophylactic process, are, therefore, to be resumed as indispensably necessary; 1st, to extract or destroy the canine virus, by a laudable suppuration, which should rapidly be promoted from the wound; 2dly, that the same, being excited by a proper degree of inflammation, should be kept up a sufficient length of time, probably between 30 and 40 days.

3dly. The good quality of suppuration requires a corresponding state of the system and constitution of the subject; it is, consequently, an object of great attention to allay the general irritation, to keep up a moderate excitement, and to counteract exhaustion,

debility, or any hectic symptoms. Those, therefore, who have, in recent time, mistrusted any kind of surgical process, from conviction that it has frequently failed, notwithstanding the diversified modes in which it has been applied, and because it is cruel or subject to many serious consequences, will do me the favour to consider the explanatory reasons I have given of the conditions requisite for its success. Among them, Dr. James Mease of Philadelphia is an opponent, whose judgment I should be the less inclined to overlook, as his long and useful researches on the subject of the canine virus, probably merit the best right to judge in these cases. To his desire of substituting to the surgical operations, bleeding and cauterization along the spine, (vide Philadelphia Medical Recorder, vol. II. page 351,) I must be permitted to offer a few remarks. I admit an analogy between the characteristic symptoms of tetanus and hydrophobic rabies, and also the propriety and success of the same means as used by Dr. Hartshor in the first disease. These, indeed, have long ago, to my knowledge, been put in practice by a gentleman of South Carolina, and a well-known pupil of the University of Pennsylvania, Dr. S. Firth. (Vide page 196 of this volume.) Such effectual means of checking arterial action, where it has an intimate connexion with the principles of muscular action, must be invaluable in tetanus, because that is not a disease of a specific *virus*, but only of specific nervous and arterial action. I therefore humbly presume that, in hydrophobic rabies, and in any stage of it, the remedying to arterial action would be of very little avail against a diffused circulating poison.

I now come to the second indication of the treatment, which directs to neutralize or destroy, by an appropriate alterative treatment, any principle of the virus diffused into the system.

We understand, by this therapeutic definition, the application of such remedies as are known to change the condition of the system, or the depraved state of fluids, into that which is healthy and pure. It is to be remarked, that we do not know, nor do I think that

there is any chemical or specific substance that could neutralize in the system this or any other virus. To obtain this desired effect, mercury has to this day been universally approved by almost all medical writers of eminence in Europe or America, who have paid attention to the present subject, among whom we may notice Petit, Astruc, Lieutaud, Dr. Robert James, Nugent, Darluc, Sauvages, Lavirotte, Du Haume Tissot, Duhamel, James Mease, Erkrmann, Andry, Portal, Dessault, &c. These have varied, however, in the choice of mercurial preparations and in the mode of administering them; but they have uniformly aimed at a continual and visible operation of this powerful remedy, such as ptyalism and other increased secretions of the body. Moseley has, in my opinion, improved upon all, by regulating the exhibition of calomel or mercurial ointment, according to the advanced stages of the disease. We must add to this testimony, as a still more convincing evidence of the remedial efficacy of mercury in the rabific disease, an ancient document published in Paris in the year 1777, by order of the Minister of the Police, and inserted in the works of Andry and Portal. It was a report of the mode of treatment adopted for hydrophobic rabies in the *Hotel-Dieu,* one of the largest hospitals in the world, by Mr. Moreau, the chief surgeon of that charity.

"Le traitement par les frictions est employé depuis fort long-tems a l'Hotel-dieu de Paris; il n'est pas rare qu'on conduise à cet hopital des malades mordus par des animaux enragés: on leur administre des frictions, & l'on tient la playe ouverte pour qu'elle suppure. Suivant M. Moreau, chirurgien en chef de cet hopital, de tous les malades qu'on a conduits à l'Hotel-dieu, et qui avoient deja horreur de l'eau, pas un seul n' a guéri. Mais de tous les malades qu'il a vus, pas un de ceux qui ont été traités avant d'éprouver l'horreur de l'eau, n'est devenu hydrophobe. (*Recherches sur la rage par M. Andry.* Paris, 1778. 8vo. p. 66.")

If not one instance of failure, therefore, has occurred out of a great number, and during many years, of

persons bitten by mad animals, whose wounds have been kept in a state of suppuration, and to whom mercurial frictions have been administered before the formation of hydrophobic symptoms, we may justly conclude that medical science is truly in possession of an efficient mode of treatment of the canine rabies. I must here suppress many remarks on the effects of this prodigious remedy on the human system, and the only one in nature that seems to possess a power commensurate to a disorder, in which so many other remedies have been found unavailing. But by referring my reader to my Essay *on the use of quicksilver* in other complaints, (Med. Repos. vol. iv. pag. 30,) I shall sufficiently provide for necessary cautions, accounting for many failures which occurred and will occur even in the hydrophobic disease, if the excitement raised by mercury is not properly regulated.

Much stress, however, has been laid on the opinion of a few eminent American physicians, who have decidedly rejected and opposed the use of mercury in any stage of hydrophobia. Dr. Thacher, one of them, is not conclusively correct in the history of this remedy, which was approved of and used long before the celebrated Dessault, who he thinks was the first that introduced it to arrest the ravages of that terrible complaint. Dr. Thacher does not deny that mercury has sometimes been efficacious; he is, however, so full of doubts, owing to the uncertain period between the bite and the attack of the symptoms, to the difficulty of determining how long the system ought to be subjected to the remedy, and when it is safe to discontinue, &c. that he prefers to reject a mercurial course. It will not require much reflection to understand how little authority such a mode of reasoning imports for a decision of great importance. Thacher, who has paid, in his treatise on hydrophobia, so much attention to quack medicines and nostrums, should not so easily have discarded what he calls "the legitimate patrimony of science." (Page 232.) As to the sweeping declaration of Dr. Chapman, against mercury, in his Therapeutics and Mat. Med. pag. 316, vol. ii. it is not

entitled to an implicit acceptance. If "mercury has been highly celebrated in hydrophobia," as he says, there should be sufficient reason to consider the subject again, before he can affirm that there is neither a single fact for a cure of canine rabies, nor a single remedy as a prophylactic, complete excision of the part excepted.

This rejection of mercury by Dr. Chapman is of course consistent to his opinion of the rabid disease, which he defines, a *tribe of associated motions*. "It is preposterous (he adds) to suppose that the virus enters the circulation; but it commences at a point, through the medium of sympathy, producing a constitutional affection, &c.," ergo mercury could be of no use. Here let us be permitted to observe, that Alexander of Macedonia could not cut the Gordian knot with more promptness and decision, (but with no good to any body,) than the Pennsylvanian professor has resolved the difficulties which we have attempted to remove, in vindication of the only justifiable mode of practice in the most terrible disease that can afflict the human race.

AN ESSAY

On the Modus Operandi of Iron, chiefly as respects its efficacy in Scrophulous Complaints; by F.G. Willemoes, M. D. of the Royal Medical Society of Copenhagen. Translated from the Latin for the Medical Repository, by Edward W. Wells, *Student of Medicine.*

Although the small progress that the science of medicine has made, has ever been, to the physician, a subject of lamentation; yet medical history proves, that we have much advanced in the knowledge of practical points, which are of the first importance. Does not every well-informed physician easily cure syphilis and intermittent fevers, however complicated they may be? Does he not remove cutaneous diseases, that were formerly given up, and considered curable

but by miracles? The discovery of these successful means is certainly not owing to the unseasonable and hyperbolical theories, that, under the form of systems, the vanity of authors is for ever obtruding upon the public, and which, ere a year is past, are consigned to oblivion, to give place to more recent conjectures. Such may in some measure dazzle, but cannot satisfy the true physician. His aim is always to subject theory to practice; for it is by analysis alone that the investigator of nature can find a sure way of tracing those occult powers and actions of the system, that, under the same laws, equally produce health and disease. It is indeed true that our curative treatment of several chronic diseases, is somewhat imperfect and incomplete; yet we should not, on that account, give it up to despair; for it is quite as likely, that, guided by rational practice, we may find remedies for these, (provided the organic structure is not so much injured, but that the vital functions exist and are sustained) as they have formerly been for other diseases once considered incurable.

I shall endeavour, as far as lies in my power, in this little Essay, to investigate the subject, with a view to what my experience has taught me concerning the efficacy of the carbonate of iron in scrophulous complaints, which I had conjectured before, from its extensively useful application, and having seen it exhibited with good effect in other diseases of the lymphatic system. To obtain a desired result from the experimental exhibition of medicines, we must necessarily pay attention to the peculiar constitution of the patient, and the specific nature of the disease. I much doubt whether some physicians, when they have employed new remedies, have been sufficiently observant in this particular; and the uncertain and undefined reputation that many have allowed to specifics, such as cinchona, mercury, &c. incline me to believe that the very idea they have of a specific medicine, induces them to extend its power and action far beyond the natural limits; as they have very little accurate knowledge of the system, and no distinct

perception of the mutual relation of conflicting forces. It is to this, perhaps, we may attribute the prevailing supposition that mercury is remedial in all diseases. This erroneous opinion is calculated to render a remedy suspicious, which, when properly administered, is good and efficacious; and such has frequently been the case in the use of iron in the practice of medicine, as its history sufficiently shows. The Grecian and Arabian physicians employed this medicine under the form of rust, or of water impregnated with it, by being thrown upon a grindstone. They also exhibited the filings in large doses against induration of the spleen and obstruction of the viscera in general, of the uterus especially. Among physicians of later date, Pouteau employed a solution of iron in mineral acids, in cancerous complaints, and Justamond used the ferrum ammoniatum with great success, in uterine disorders, at the time when Winslow was in London. Sydenham, Lentin, and almost all succeeding physicians, have greatly extolled the efficacy of iron in the shape of mineral waters, in cachexia; as the Pyrmont water, for instance. But what are we to understand by the term *cachexia?* Under that title are classed almost all diseases that become chronic and destroy the constitution; such as atrophy, gout, &c. Thence, nothing can be derived to constitute an indication of iron. It would be much better, by attention to a proper and timely use of the remedy, to endeavour to prevent diseases degenerating into cachexia; and to this end is it not necessary to define what state of the system, and what effect of the remedy, can authorize us to hope for a happy result?

Before I revert my proposition, I will briefly mention what induced me to make trial of the carbonate of iron in scrophulous complaints. While on a tour in the south of Germany, where the medical schools had pretty generally accommodated the theory of stimulants to principles of philosophy, or of nature so called, I observed that physicians considered iron to be indicated, when the digestive apparatus, more especially when the principal lymphatic organs, the absorbents, or

the direct passages of the same, were affected. They employed the preparations of that metal with the happiest success in chlorosis, dropsy, &c. Afterwards I went to Scotland, when my experience of the efficacy of iron, in the practice of the German physicians, especially Roschlaubius and Marcus, was again called to mind. Abernethy, Hume, and other eminent physicians of London, as well as Gregory and Duncan senr. of Edinburgh, were employed in experiments with the carbonate of iron in carcinomatous complaints, the efficacy of which Carmichael of Dublin had greatly extolled; and great hopes were entertained from its use. On my return, I had much interest in repeating these experiments, in the Royal Hospital, in suspected cases of cancer of the uterus; but their result, on account of the unconquered progress of organic destruction, answered little to my expectations. I resolved, therefore, among the poor placed under my care, to extend my experiments, with the carbonate of iron, to scrophula, and the various sorts of scrophulous ulcers; the happy result of which, in many cures, confirmed the theory which I had in part derived from the German physicians. The principle that the English have embraced, in explanation of their experiments with iron upon cancer, differs entirely from the reasoning which I apply to my successful trials in scrophula. When it was proved, by accurate experiments, that none of the arsenical preparations made use of by Justamond were beneficial in genuine carcinoma, the English turned their attention to the nature of cancer, in order, by that means, to discover if possible some remedy for this most cruel plague of the human race; and eminent in the investigation was the medical society, of which Baillie, Sims, Willan, Hume, Abernethy, Pearson, and others of great celebrity, were members. In the year 1802 an hospital was founded by that society, for the express purpose of treating cancerous complaints, and a report was published, with thirteen questions on cancer, which it was proposed to the members to solve; such as, the diagnostic symptoms of cancer—whether always idiopathic and local—whether

hereditary or contagious—whether controlled by climate—what diseases were most similar to it—what temperament and strength of constitution was most obnoxious to it—whether it always primarily attacked the lymphatic glands—whether it admitted a cure by medical means? &c. Afterwards, the English physicians instituted many experiments on the subject. Of their writings, I am best acquainted with the following: *Dr. Adams's Inquiries into the nature of Cancer: Dr. Nisbeth on Cancer: Abernethy's Classification of Tumors in Surgical Observations, part* 1. and lastly, *Carmichael's Essay on the effects of the carbonate of iron upon Cancer.*

Carmichael's discovery of the efficacy of iron upon cancer, was by no means fortuitous; which shows that it is proper to pay attention to analogy, since it sometimes leads us to the use of a good remedy.

That gentleman, as well as Dr. Adams, was of opinion that cancer did not depend on a general affection of the system; and knowing that iron possessed great powers in destroying intestinal worms, he considered whether it might not, in a like manner, act as a poison on other parasitic animalcula, which, according to his theory, he believed constituted cancer. Many experiments which he made on the subject, were attended with favourable results. He used the carbonate both externally and internally, in phagedænic ulcers, in open cancer of the breast, and even in suspected carcinoma of the uterus, with such success, that the disease, they say, was not only alleviated, but often radically cured!

Of the patients in our Royal Hospital, whose symptoms manifested an incipient disorganization of the uterus, and who made use of iron in the manner recommended by Carmichael, it will be sufficient to mention one, an unmarried woman, 30 years of age, whose external habit plainly declared a primary affection of the uterine system. She laboured under frequent menorrhagia; at intervals had a fetid excoriating fluor albus, and experienced pains over the whole body, especially in the lumbar region, resembling labour pains; otherwise she was feverish, at times languid and emaciated. This woman used iron a long time. She took the car-

bonate in the form of pills, gradually increasing the dose to 40 grains a day, which was continued for more than two months. She frequently, in the course of the day, injected into the vagina a solution of sulphate of iron, in the proportion of 2 drachms to 8 ounces of water. For a time she seemed to gain strength, and her constitution appeared to be changed for the better; the quantity and fœtor of the uterine effusion decreased, and afterwards, once or twice, about the usual period of menstruation, flowed copiously and abundantly; but, alas! the event deceived our expectations; for, from the excoriation of the parts, she became unable to bear the injection,—consequently, was obliged to relinquish it for the internal use of the remedy only, and in fine, almost beyond hope, relapsed into the state in which she was prior to its exhibition.

Taught by this, and other experiments that ended in disappointment, I perceived that the English physicians, and especially Carmichael, had been too hasty in judging of iron as a specific in cancer. I, however, have always been of opinion, that when we shall have acquired an accurate knowledge of its mode of operation, we may advantageously employ it, if not to cure genuine and confirmed cancer, yet certainly to prevent other diseases degenerating into it. I, therefore, took occasion to make trial of the remedy in less obstinate diseases of the lymphatic system; where the organic structure was not so changed as to resist the effects of medicines; and I saw, with the greatest pleasure, that my hopes were crowned with success in the cure of the sick committed to my care. I will cite one case, among many others, to prove its efficacy in scrophula.

(*To be continued in our next.*)

REVIEW.

MEDICO-LEGAL MANUAL *of* POISONS *introduced into the Stomach, and of their Remedies, &c. By* C. A. H. A. BERTRAND, M. D. *of Pont du Château, National Associate of the Medical Societies of Paris, of Lyon, &c.*

THE third class of Mons. Bertrand's toxicology, is that of narcotic or stupifying poisons.

The first chapter contains the vegetable substances possessing those deleterious properties, and appears very important for practical purposes.

The author, following up his usual method of ascertaining the various external appearances of concentrated vegetable poisons, obliges us to omit the description he gives of them, because this being most probably variable, according to the modes by which it may be extracted, we could not depend upon it.

The vegetable productions that he first treats, according to the system of Jussieu, are the mushrooms. (*Plantes acotyledones.*) The following we notice, with their characters, presuming that they are frequently met with in this country.

1. *Agaricus Muscarius;* because its flat and very large scarlet surface, from six to eight inches in circumference, is elegantly spotted with dark warts. Its follicles are as white as milk; and its stem thick, and from four to eight inches high.

5. *Agaricus necator;* feathery surface; hair-like edges.

7. *Agaricus fragilis;* top yellow, convex, and transparent; follicles yellow; stem naked; grows on old and rotten trees.

18. *Agaricus piperatus;* large and flat top, with an umbilical appendage; milky, foldings flesh-coloured, and much curved; short stems; grows in woods and meadows: it is extraordinarily pungent and bitter.

19. *Agaricus separatus;* surface polished and livid; folliculi blackish and separated; tuberculous stem; grows on dung.

20. *Agaricus fimetarius;* six or eight inches high; campaniform; lacerated; black and tortuous folliculi; fistulous stem; grows also on dung, in damp woods or stagnant water.

21. *Agaricus campanulatus* differs from the last only by its reversed edge and transparency.

22. *Agaricus lactifluus;* flat and wide top; brownish yellow; full of a sweetish milk; folliculi same colour as the top; long and fleshy stem; grows in woods.

23. *Agaricus strangulatus*, and other vegetives of the kind, principally *the Head of Medusa*, which grows by agglomeration at the foot of oaks, *fungus minimus niger*, &c. are equally dangerous.

N. B. There is a great variety of deleterious mushrooms, which may be better guarded against, by subjoining the characteristic forms and colours of those which are esteemed for their nutritious and savoury juice, so commonly used as one of the best condiments.

Their form is simple, their appearance dry; their substance white, neither soft nor watery; they are light, and do not emit any unpleasant smell; but rather like that of fresh wheat flour; by breaking or cutting, the colour is not altered; their head is regularly circular; surface spheroid; the pellicle which covers it may be of a brownish or blackish hue, and frequently split on the brim; the folliculi must be close, and generally of a pale rose colour or pure white; they are better still, when assailed by ground insects; and when they grow in sunshine, on strong ground, and among graminous plants. "*Tutissimi fungi, qui rubent callo minus diluto rubore quam boleti.*"—PLINY.

In the 10th class of Jussieu, (monocotyledones,) or the gramina, we find the *lolium tumulentum*, (ray grass,) the seeds of which belong to this kind of poison. We are warned against it in the New Testament.

The 37th class, the solani, contains the *datura stramonium*, (Jamestown weed,) the *datura ferox*, (long spined thorn-apple,) the *atropa belladona*, (deadly nightshade,) the *hyoscyamus niger*, (henbane,) the *physalis alkekengy*, (ground cherry,) the *nicotiana tabacum*, (tobacco plant.)

The 43d class, APOCYNEES.

Strychnos nux vomica; S. ignatia; S. upas antiar of Java.

The 45th class; Rosaces. *Rhododendrum Chrysanthum.*

The 55th class; Umbelliferæ, Mountain laurel—*Conium maculatum*, (hemlock)—*Cicuta virosa.*

The 57th class; Papavera. *Papaver somniferum*, (the white poppy.)

Of the 84th class; *Prunus lauro-cerasus*, (wild cherry tree.)

Of the 92d class; the berries of the *Taxus baccata*, and several others of less notice, are in this treatise, designated as the most dangerous among the narcotic or stupifying vegetable poisons.

When taken internally, they however produce at first a stimulant action, owing to the less or greater acrid or caustic property they frequently possess. Hence, a burning thirst, violent retchings, with hiccough, excruciating pains in the bowels, attended with black and bloody stools, sore throat, ptyalism, lock-jaw, and difficulty of swallowing; but, the predominating attribute of the narcotic power of deleterious plants, creates spasms or convulsions of different kinds, the risus sardonicus, a delirium of contrasted passions, of anger or merriment, singing or crying, difficult respiration, small, hard, feeble, and contracted pulse, coma, confused sight, stupor, dilated and fixed pupils; sometimes, apparent drunkenness, with a turgid apoplectic face, sparkling and protruding eyes, epilepsy, and, in fine, livid face with spots, extreme coldness and palsy of the extremities, cold sweats, startings, absence of feeling, loss of the voice, and greenish frothy mucus from the mouth and nose, as death approaches.

Of these symptoms, experience has shown some characteristic varieties, or symptomatic differences, according to plants. Thus, the *Solanum dulcamara* produces ptyalism; the *Datura stramonium* affects the eyes, and its effect is more comatose; the *Atropa belladona* creates delirious joy; and others cause diaphragmatic affections; the *Hyosciamus*, or henbane, gives a wild look and dread of water; opium, an immediate torpor and

reverie; and several sorts of mushrooms induce strictures of the œsophagus, &c.

All these are proved by cases adduced by the present writer, which, with autopsic examinations, must establish the best remediate and forensic decisions, as we have before said. In some cases of poisoning by vegetable substances, a violent caustic operation has been effected.

The Academy of Sciences of Paris, in 1773, recorded the case of a soldier poisoned by the *cicuta virosa*, whose stomach had been perforated by it. M. Bertrand adds, that it is not rare to find traces of inflammation, erosion, and gangrene; but, in general, these poisons more particularly affect the blood vessels, by expanding their coats in the brain, and in the sheath of the spinal marrow, and by macerating several parts of the organs. These deleterious actions, however, according to *Legallois*, are only secondary to that on the nervous system, received through the great sympathetic nerve. It is to be observed, however, that the operation of opium, according to Orfila, and as our author properly notices, in a strong dose, is of a particular nature and *sui generis*.

His next object is to define some certain proceedings in cases of judicial inquest, to enable physicians to discover the cause of death by these poisons. Many of these are applicable to that which has already been detailed, in the first and second numbers of the present volume: we will add, however, that it is not easy to define, by chemical tests, the constituent principles of vegetable poisons, which, after all, are the same as those constituting the two first classes, although in different proportions. A genuine fluid obtained from the abdominal cavities, after it has been well evaporated and condensed, will give, 1st, by distillation, an acid partly saturated with ammonia; 2dly, distilled with oxy-muriatic acid, the aqueous solution immediately forms a yellow precipitate, and the liquor becomes of a citron colour.

3dly. Many chemical actions of the nitric acid upon bitter vegetable substances, are known to disengage

prussic acid, and almost always produce ammonia. These results should, by analogy, guide us to the detection of this kind of poisoning.

4thly. The tests of the prussic acid, which has been detected to be a highly narcotic compound, are equally applicable to vegetable poisons. This acid smells like peach leaves, or bitter almonds; its taste is at first sweetish, and afterwards acid and burning; it slightly reddens the tincture of litmus; it boils at 98° Fahrenheit, and freezes at 65°; its crystals are similar to those of the nitrate of ammonia; it ignites in the air, at the approach of fire; is soluble in alcohol; decomposes alkaline sulphurets and soap-suds; forms Prussian blue on hyper-oxygenated iron; precipitates the nitrate of silver white, and is decomposed by a strong light, and reduced to its first elements, ammonia and carbonic acid.

5thly. The secondary compounds are various, and also sufficiently defined to prove the presence of vegetable poisons in a legal investigation, when many of them are detected; these are *gums*, *mucus*, *resins*, *volatile oil*, *vegetable albumen*, *vegetable fibrine*, *adipocire*, *sugar*, *vegetable acids*, and *salts*, such as citrate of potash, muriate of potash, muriate of lime, muriate of ammonia, sulphate of potash, phosphate of magnesia, and the *narcotine*, a salt lately discovered.

6thly. The residuum of vegetable poisons found in the human body, may be tried by counter-proofs upon living animals, such as dogs and cats. Muscular parts and the nerves of dead persons impregnated with narcotic poisons, on being subjected to galvanism, will remain without contractile power; this is proved by experiments upon frogs recently killed and skinned.

The second chapter under this head treats of poisonings by potations of alcoholic liquors and their various compounds, which subject is too well known in this country to require insertion in these pages.

Mr. B. gives a third chapter to the subject of the different ethers, which we think of some importance, as this chemical compound of mineral acids and alcohol is of very frequent use in medicine.

In the Memoirs of the Royal Society of medicine, (1779,) facts were recorded, proving the deleterious effects of ether when taken in large doses. The subject not being yet, however, sufficiently elucidated. Mons. B. experimented upon a slut of middle size and strong by age, which having lapped an ounce of ether diluted with milk, died 5 hours after. She was successively nauseated, convulsed, and palsied, the respiration gradually becoming difficult during the last hour, which terminated the experiment. Subsequent examination proved an inflamed state of the stomach and intestinal canal; the heart and large vessels were gorged with black and decomposed blood; the brain presented the formation of an artificial vascular net on the internal membranes. From these appearances, he concludes, that a universal destructive action was effected by the ether, on the heart, the nervous system, and the organs of digestion; and that too frequently used in considerable doses, it is really deleterious.

The therapeutic rules recommended in cases of poisoning, by narcotic or inebriating substances, furnish many indications similar to those we have mentioned in the preceding classes; first, by vomiting, to be excited by titillation or by warm water, if it is possible so to do, or by active vitriolic or antimonial emetics in more advanced cases. Vegetable or mineral acids are next in great repute, to counteract the effects of narcotic poisons, although it is supposed that their operation is not to be depended upon, except the same is expelled. The useful acids are the acetic, tartaric, citric, and oxymuriatic, among which the latter ranks the first. Proofs also are given of the powerful counteraction of *narcotism* by a strong decoction of coffee, and even in cases of poisoning by *cicuta virosa*. Coffee is too well known and daily experienced in counteracting digestive or organic torpor, not to be resorted to. It would be equally active if administered by injection. External fomentations and frictions with acids are also extremely useful.

At the invasion of the organic functions by stupefaction and torpor, convulsions and trismus are fre-

quently observed, and we have then witnessed the beneficial effects of ice applied on the head, neck, and palms of the hands, and of drinks of the coldest temperature; in fine, the volatile and pungent compounds of ammonia or ether on the organs of respiration. rubefacient and epispastic applications on large surfaces of the body, electricity, galvanism, and even the insufflation of air to the lungs, by bellows or a syringe, are remedies generally or severally approved, which promise direct counteraction of the poison under consideration.

Mr. Bertrand has so far endeavoured to render his treatise on toxicology complete, that he has added supplementary chapters on poisoning by circumstances; that is, by muscles, oysters, crabs, lobsters, and other shell fish. These may be rendered deleterious by the flesh of diseased animals, by waters accidentally or naturally impregnated with poisonous substances, and with putrid gases formed in the air during hot and moist weather, which frequently cause pestilential diseases.

There is not one of the above articles but might furnish us abundant matter of facts, from experimental observation, but which our limits compel us to suppress, mentioning, as a matter of caution, that it should be known to every body, that shell fish obtained in places or on banks inhabited by that kind of crustaceous animals, called *sea stars* or *quals*, are particularly dangerous in spawning time, during 3 months, May, June, and July: the fry of the latter is proved to be extremely venomous, and this quality is communicated principally to other kinds, which feed upon it.

Another consideration, not less important to be remembered by physicians reporting legally on cases of poisoning, is that of natural and spontaneous morbid causes, which eventually, but falsely, have been attributed to poisons.

On the authority of Morgagni, Van Swieten, and others, it has been proved, that the gastric juices, and the bile, may acquire so great a degree of acrimony and causticity, as to perforate the stomach or bowels, (Vide Med. Repos. N. S. Vol. III. pag. 287,)

and create symptoms perfectly similar to those which appertain to known sorts of poisons. Worms in the intestines, invagination, strangulation of a small hernia, congestion of blood in the brain, rupture and effusion of internal abscesses, repulsion of cutaneous eruptions, and a state of floating gout in the system, have excited a series of symptoms perfectly similar to poisoning. Hence, the strict and minute attention to be given to any preceding and commemorative circumstances of the state of the body, health, and mind, and to external and internal alterations, without which the symptoms of the dying subject could not, in any case, be exclusively ascribed to poison.*

In terminating our Review of the toxicology of Mons. Bertrand, we remark, that it contains a catalogue, under the head of chemical tests, of 56 different articles, with a general table of their reaction by colour, solution, insolubility, precipitation, effervescence, and revivification, which we think would be a very desirable *vade mecum*, to assist the memory in any responsible case of examination. Thus far we have accomplished our intended analysis of one of the most important and useful works, and to the authority of which we fully would subscribe in any forensic case of accidental or premeditated poison, as well as in the exercise of practical responsibility.

Medical and Philosophical Essays, &c. By J. L. E. W. Shecut, *Practitioner of Physic; Member of the Literary and Philosophical Society of South Carolina. Charleston,* 1819. *in* 8vo. 260 *pages.*

This is truly a national work, and its materials are equally interesting to all descriptions of thinking people in this extensive confederacy. It contains, 1st, the topography of one of the principal cities and ports of

* Henrietta of England, sister-in-law of Louis xiv. died in two days with excruciating tormina, bilious colic, and convulsions. It was thought she had been poisoned; but from autopsic examination, this was proved not to have been the case.

the southern section; 2dly, an Essay on the yellow fever; 3dly, on contagion and infection; and 4thly, one on electricity; all of which form a large contribution of useful knowledge to the history of the United States, the sciences of medicine, and experimental philosophy. How the author could logically arrange these different subjects in one body, or show their necessary links and connexion, it would be difficult for us to say; but we presume that the plan and intention of the work may be better defined by an abridged exposition of the principal head of it, than by our explanatory remarks.

The foundation of the city of Charleston is traced as far back as the year 1680, on the site formed by the junction of *Cooper* and *Ashley* rivers, in latitude 32° 48′ N. Several noblemen having been invested by Charles II. with the property of South Carolina, in their turn created baronies of 12,000 acres, under their respective title of *Landgraves* and *Cassiques*.

In a few years they had made great progress in cultivation. This establishment became a port of entry in 1696, in spite of the difficulty encountered from the low ground, intersected by many creeks, and ponds, and marshes. One of the *Landgraves*, who owned the site of the city, as a garden, had introduced rice; and it soon became the great staple of the country, and, by an annual income, rapidly assisted the formation of the capital and province of South Carolina, the succeeding periods of which are instructively and correctly detailed by Dr. Shecut, until the middle of the 18th century, when 230 vessels were annually employed in the exportation of the productions of the province. In the voyage to Carolina, in 1709, by John Lawson, we read, indeed, that Charleston was a commodious city: He says, that "The town has very regular and fair streets, in which are good buildings of brick and wood. The inhabitants, by their wise management and industry, have much improved the country, which is in as thriving circumstances, at this time, as any colony on the continent of English-America. Since the first planters, abundance

of French and others have gone over, and raised themselves to considerable fortunes. They are very neat and exact in packing and shipping their commodities: which method has got them a great character abroad. They have a considerable trade, both to Europe and the West Indies, whereby they become rich, and are supplied with all things for trade and genteel living, which several other places fall short of. Their cohabiting in a town, has drawn to them ingenious people of all sciences, whereby they have tutors among them, that educate their youth a-la-mode. There is a French church in town, of the reformed religion, and several meeting houses for dissenting congregations. They have a well-disciplined militia; their horse is most gentlemanly and well mounted, and the best in America, and may equalize any in other parts: their officers, both infantry and cavalry, generally appear in scarlet mountings, and as rich as in most regiments belonging to the crown, which shows the richness and grandeur of this colony." This document we regret not to find in the present book.

Pursuing this history through all branches of improvement of this capital of our independent state, Dr. S. had to tread upon a very fertile ground, which gave birth to eminent men in all branches of learning and natural philosophy: Such were, indeed, John Drayton, Stephen Elliot, Henry Middleton, General Pinckney, Drs. M'Bride, Lining, Chalmers, Milligan, and the celebrated Ramsay. But the sketch of the author on the climate and meteorological observations of Charleston, now suggests a few remarks. We are surprised, that relying on the authority of Dr. Ramsay, who comparing American climates to those of Europe, has allowed a difference of 12 degrees in temperature, Dr. Shecut should assimilate them to many places in France, Italy, Russia, and Asia. All these are at great distances of latitude, and many of them are not subject to more than five or eight degrees of heat above the summer temperature. From the tables of the author before us, we even perceive that, during a series of 25 years, the greatest heat of Charleston was

but once below 90°, and at all other times above it, even as high as 101°. Now, such a temperature is unheard of in any of the European countries designated in the work before us. The author is also inclined to compare the temperature of Charleston with that of New-York, which is nearly 10 degrees more northerly, and he relates, (page 68,) that within preceding years we have experienced from 101° to 124° of heat. Now, this never was the case, taking observation of the maximum at any degree of the general temperature. (Vide Med. Repos. *passim.*) The fact is, that Charleston and South Carolina, although nine degrees from the tropics, experience, *in toto*, the effects of a tropical climate. Should meteorological records give out exaggerated observations, we have the means to judge by agricultural produce, not one article of which could become a staple in any northern or temperate sections of the continent of Europe. Besides, being of a much warmer ordinary temperature, Charleston and the adjacent territory, for a considerable distance low, and subject to great moisture, fully participate in the great vicissitudes of the North American climate, which in frequent instances rapidly creates a thermometrical difference of 40°, to the greatest detriment of the human constitution, and of vegetation. Hence Charleston has always been remarkable for the prevalence of epidemic fevers, although, like all other parts of America, it has offered a greater regularity of temperature in each season, within the experience of many persons, owing, no doubt, to cultivation being carried on a more extensive plan in the surrounding regions.

The second part of the work is an Essay on the yellow fever, and deserves much attention and some criticism. Dr. Shecut places its primordial cause in that atmospheric constitution of southern climates, which, by hot and dry, or hot and moist summers, absorbs the due proportion of electric fluid, that principle which diffuses health and vitality through all animated nature. In this state of the ambient air, *specific gaseous* poisons are generated, which, being

inhaled, produce, according to predisposition, a common bilious remittent, or yellow fever, in proportion to the want of electrical equilibrium in the atmosphere. This may eventually be recovered, by thunder and lightning, or cold and frost, when the last disease soon disappears. But should the period of the sickly season elapse, without remarkable exhaustion of electricity, exhalations of *marsh miasmata*, combined with putrid *animal effluvia*, will engender the epidemic summer and autumnal fevers, and even some sporadic cases of yellow fever; but nothing like an epidemic of the same. So far so good; and to the principal points of this theory we have already attended, as one which, many years of observation on pestilential epidemics, have pointed out to us as true and operative among us, just as it is against the caravans of the desert, or in Constantinople and Philadelphia.

The application made by the author of these agencies to the population of his country, illustrated by a historical review of former and recent occurrences of yellow fever, and correct meteorological tables, we judge to be authoritative in medical philosophy, and that it victoriously supersedes many ancient and modern systems.

We do not admire so much the premised distinction between *marsh miasmata* and the effluvia from animal putrefaction, the first to create the ordinary bilious remittent, &c., and the latter the yellow fever; nor would the prevalence of the one in scattered populations or villages, and of the other in populous cities, prove that position sooner, than it evidences only more numerous and fermentable receptacles of putrid exhalations.* Putrefaction of animal or vegetable substances affords, in ultimate analysis, the same products, and cannot differ much, but by greater or less intensity. Marsh miasmata result frequently from an immense quantity of insects and animalcula, equally pestiferous as the swarms of drowned locusts in the Nile have often been

* The Medical Society of Maryland have declared, "they do not consider the putrefaction of animal matter competent to the production of yellow fever." (Vide page 346.)

among the Egyptians. On the other hand, there is, perhaps, nothing more dangerous during excessively hot weather, than the exhalations arising from the hatchways of a ship, where there is nothing but bilge-water; except that from a bale of damaged cotton in similar circumstances.

The subject of second causes of yellow fever has been fully investigated by our author in point of facts, and in relation to all sorts of people; some, who by constitutional and unseasoned predispositions become most probably the victims of this disorder, and others that can with impunity confront the danger.

But, in a question so interesting, and incompatible with the idea of a specific poison or contagion, the word *naturalization*, or *assimilation*, teaches us nothing of the predisposing disposition, which can render the human body so much more liable to it, or vice versa. From the inquiry made by Dr. S. into the component parts of the atmosphere, to determine the primordial cause of pestilential fever, inferences should have consistently been drawn, to come at some explanation of this operation in the human system. We are already apprized, that, owing to a more perfect organization of the respiratory organs, and also to habitual experiments, many persons can keep up the powers of life, in a state of suspended animation, during a length of time, in which others would irrevocably perish. Again, the laws governing the renewal of caloric in the human system, are various, from circumstances of colour of the surface, the greater or less degree of cutaneous secretory functions, and from a more evaporable nature of the animal fluids in one description of people than another. Hence, the European or the North American, transplanted into the tropical regions, has long to contend against habitual and profuse sweats, while, in the same temperature, the Creole hardly experiences more than a comfortable degree of *mador*. These facts or data being satisfactorily established, and especially, that the evolutions or affinity of caloric for certain bodies, is the same as that of electricity, it would follow, that human beings may be diversely

affected by electricity, *resinous* or *vitreous*; *positively* or *negatively*; *plus* or *minus*, &c.; and be defined accordingly, as more exposed to the primary cause of pestilential fevers. An experienced medical *electrician*, as Dr. S., would not have failed investigating, with great success, a question so interesting and congenial to his stated opinions and practical skilfulness; but this has not been done.

We are also impelled to disapprove the definition of a specific poison, that arises from marsh miasmata, or putrid animal matters, to constitute the yellow fever, which is compared to arsenic or other mineral poisons. (Vide page 116.) Here the author loses sight entirely of the want of electrical equilibrium in the atmosphere, and of the vitality, which being no longer imparted to animated beings, leads to decomposition and gangrene of the animal fluids.

We regret, in this advanced stage and progress of his inquiry, that he should have abandoned his theory of external and deleterious agencies on the animal economy, to convert it into that of a locally created specific poison, organically affecting the system, which he literally has compared to metallic and other mineral poisons. He even goes so far as to discuss whether this poison is administered through the stomach or the lungs; and what is more surprising, however striking and tumultuous are the first symptoms of yellow fever on the stomach and whole digestive apparatus, he finally chooses to have the same poison primarily insinuated through the olfactory nerves into the brain! Thus proceeding from one error to another, he gradually and unguardedly falls into all the cavils and assumed propositions of the contagionists; for, speaking of a combination of *marsh miasmata* and *animal putrefaction*, when there are but little or no thunder and lightning, it forms, says he, a *specific gaseous poison*, and when causes of *extreme malignity* are superadded to it, it may then become *contagious* according to circumstances. (Page 115.)

In the subsequent Essay on contagion and infection, (the most complex and confused in the whole work,)

Dr. S. has succeeded in a compromise with all contagionists and importers, by making yellow fever, at last, a disease of human contagion, communicable from person to person, or from body or bed clothes, by what he calls *fomites*. These fomites are of course importable. He has also a nosology for *contagions* and *infections*. The second class of the latter embraces the diseases resulting from a compound of *septic miasma* and *azote*, or animal effluvia; and in it yellow fever is located. In the syllabus of his doctrine, we see nothing more of electricity, that great agent for the formation of diseases, which we thought had been sufficiently explanatory. With regret, we find that it matters not how the way of coming to the doctrine of communicability is theorized, by contagion or infection, fomes or animal azotic miasma; it is nevertheless that of a *specific poison*, which reproduces itself by contact. Dr. S. says, that it has rarely turned out to be so in Charleston, but probably in other states; yet it appears, that if that capital has oftener been visited by yellow fever than any city in the Union, he should be aware that he subscribes to an experimental and demonstrative fact, proving the fallacy of his last speculative views, which the editors of the Medical Repository have never countenanced, and often have refuted.

This Essay abounds with singular and extraordinary matter and ideas. Not wishing, however, to prejudice our readers, but that they may judge for themselves, we will only mention some of them equally superseding criticism or refutation.

1. The author admits contagions of two kinds: one produced by the healthy action of the vessels, as that of the rattlesnake, viper, and spider, as well as by certain vegetable and mineral poisons, which are *minor contagions*; the other formed in consequence of a *morbid condition of the secreting arteries*, as *lues*, *variola*, and *vaccinia*; but these are communicable *ad infinitum*. Why animal or mineral poisons, which cannot reproduce a disease from one individual to another, are classed among the contagions, is more than we can say.

2. Among the *contagions* he places *phthisis pulmo-*

nalis, and among the infections, intermittent, remittent, and typhus fevers, catarrhs, and all kinds of epidemics.

3. In the treatment of yellow fever, he rejects both the lancet and mercury. "He knows, from fatal experience, that the last is at best a dangerous remedy."

4. Speaking of animal poisons, (*minor contagions*,) Dr. S. blends with his subject, that of the power which the rattlesnake of America (*crotalus horridus*) possesses of charming or fascinating squirrels, birds, &c.; to which he subjoins the following surprising fact, which, on his authority, we deem worthy of the attention of our readers.

"I have conversed with several gentlemen of known veracity, who have assured me that they have seen instances, in which this fascinating power influenced persons grown to maturity; and that they were found almost prostrate, and appeared to be in the act of attempting (if the thing had been practicable) to crawl voluntarily into the mouths of the serpents. Two of the cases related were adults, and the third a boy of four years of age. And, indeed, I have heard so many well attested accounts of similar facts, during the twelve years that I practised in the interior of this state, that I am perfectly convinced of this property, and it only remains to be accounted for upon rational principles." (Page 141.)

The last part of the book before us, is "An *Inquiry into the properties and powers of the electric fluid, and its artificial application to medical uses.*" We beg leave to refer our readers to the performance itself, not without acknowledging its merits in point of scientific knowledge of the subject, and of all recent improvements, for its useful and immediate application to many diseases.

A Rejoinder to the Reviewer of the Review of the Discourses on the Elements of Therapeutics and Materia Medica; by N. Chapman, M.D. Professor of the Institutes, &c. as published in our last; page 280.

The Reviewer of the above Review seems to express that Dr. Chapman's assertion respecting "the *slender* and *imperfect*" American efforts towards the materia medica, had reference only to times anterior to the period when our medical schools began to flourish. But the author has mentioned no writer of this period, and has alluded only to graduates, and to his predecessor. It is to be regretted that distant readers cannot identify who these are, and to what articles they have contributed.

Hydrargyrus, that important article in materia medica, had been long ago introduced in Boston, with the happiest effects, for the treatment of various internal diseases, as far back as 1730, and probably much sooner than in any school of Europe: (*Vide Med. Repos.* Vol. 1. page 500:) That fact is not mentioned in the above work. It is even alleged, that only one work on American materia medica was published in 1787, by a German of the name of Shœpf. This is not correct; for we can find a still more ancient book by a Swede, John Van Coelln, on the specific virtues ascribed to certain American plants in curing diseases. These, and other writers on American Botany and Materia Medica, were native Europeans, to whom the Reviewer has had not the least reference.

Nor is he aware that he has mistaken the doctrine of Professor C. on sympathy, "or that *he has been fighting against an imaginary object.*" Nothing is more explicit than the following proposition: (Vol. 1. page 52:) "The principles of sympathy pervade the body, every portion of it being susceptible of associative actions, by which means the several parts are linked together, so as to constitute one whole or unity of system." The author has previously established, (page 49,) that *according to the degree of diffusibility of*

the medicinal substance, an action is raised always similar, provided it is confined in the same system on structure, losing its homogeneous character, if the action runs into another. He concludes, that *the spot primarily acted upon is a point, from which is diffused the radiated impression.* And this is sympathy! Now we must recollect that he rejects (page 49) "the fluids altogether in his inquiries relative to the operation of medicines;" and considers that the "mediation of the nerves is not exclusively to be referred to" in this phenomenon, &c. It follows, then, that the *stomach, when assailed by impressions which it cannot resist,* (page 53,) *or any other parts in the link, &c. according to their structure,* "are the medium of the operation of remedies in the correction of morbid derangement;" (page 54;) therefore, the Reviewer has been in the right to conclude, from such premises of Professor Chapman, as his opinion, 1st, That as soon as an impression is received by medicines, either on the alimentary canal, on the skin, or on the organ of smell, there is an established sympathy from the dead on the living matter: 2dly, That remediate substances do furnish a peculiar and well adapted sympathy to various diseases: 3dly, That each individual article of the materia medica is endowed with occult qualities, to counteract a disease by sympathy. And we add a more explicit conclusion; that the *diffusible property of the substance employed as a medicine, is the primordial cause, which, by impressions, sets on various actions, according to different structures,* and, in a sympathetic mode, assails the disease. Such conclusions we are now told, by the Reviewer of the Review, "are absurd, and are heartily rejected by the Pennsylvania Professor!" If so, why do you not reject also the principles from which they are so plainly and naturally derived, instead of alleging error or misconception on our part? Is not your mode of reasoning a subterfuge, or what may more politely be defined a retreat, covered by a feigned attack?

To prove the misconception of the Reviewer, it is said, that "in medicine the word *sympathy* is used in a metaphorical sense." Pray, is not this assertion

itself a proof of the suspicion that your system is erroneous?

Again, it is said, that by the opposed doctrine, it is meant only to account for the result of a medicine applied to an organ; and the impression of which is carried to other parts of the system, by the law of an intercommunion of sensation between its various parts. (*Recorder*, p. 276.) This allegation must, nevertheless, fall to the ground; because you have laboured hard to prove that neither animal fluids nor nerves have any thing to do with that intercommunion. Also, to account for the wonderful channels of diffusion, and operation of medicines, you give us but the contiguity of certain systems, parts, and dry membranes. Is not that *sympathy* above comprehension and below medical philosophy? Is not that induction contrary to the axiom, "*medicamentum non agit in cadaver?*" And is it not unphilosophical, and more repugnant than judicial astrology, or the cabalistic philosophy?

The subsequent observations of the Reviewer of the Review, under this head, require from us no further refutation. He must think and write again, before he can assume the right of imputing to us *confusion of ideas and deliramentum doctrinæ.*

We are by no means willing to admit that a voluminous work, on materia medica and therapeutics, should not have exhibited any one of those nutritious articles, which are indispensably necessary in the clinical practice of medicine and surgery. (See Cullen's Materia Medica.) But we adverted to that omission, to show how the operation of aliments and digestion can lead us into a more rational doctrine of the modus operandi of medicines. We are happy to find it has excited no objection nor animadversion from our critic.

We laid no stress on a *barbaric* Latin word, that of *tormena*, which stands corrected in the second, and yet remains without erratum in the first volume, pages 203 and 267. On the subject of typographical errors, *veniam damus, atque rogamus vicissim*; but the Reviewer has blamed the repeated occurrences of these, inasmuch as

they indicate imperfect literary acquirements, where it might be supposed they abundantly exist. He has exclaimed only against the numerous marks of haste and neglect in others, in this performance, with which he conscientiously declares he might fill up many pages, was he subject to impressions of mean jealousies or paltry passions, as the Reviewer of the Review seems to think. Before he made this declaration, *he* should have provided also an erratum in the *Medical Recorder*, for the following words; page 279, line 30: "Those *schema cabalistica;*" which should read, *schemata cabalistica*, or *schemæ cabalisticæ*. To the sneering and admonishing remarks, that we may relinquish our preference to the science of the Arabs and *Cabalists*, for the theories of Dr. Chapman, it is respectfully proposed to subjoin the following historical and instructive note.

The Hebrew word *cabal* (but not *cabalistic*) has made its way into the modern languages, to designate any hidden plan, design, or disguised attempts, by opponents conspiring against the welfare or good fame of their enemy, probably from the mysterious art or concealed principles of the ancient cabalistic philosophers, who were a harmless and peaceable set of people. Hence, in no modern language is the word *Cabalistic* used as an adjective of *Cabal*. The origin of the *Cabalists* has been traced to the ancient Jews. Many of them existed among the primitive Christians. Their art was connected with judicial astrology and magic. They aimed at the discovery of unknown laws and secrets in nature, the celestial regions, and the science of numbers. By the invertion of the letters of sacred words in Holy Writ, they pretended to explain divine revelation; and by amulets, talismans bearing marks, figures, and words, they could protect children and domestic animals against diseases. As late as the 16th century, two works were published in Germany: one, *De Cabalo et Verbo Mirifico;* the other, *De Arte Cabilisticâ.*

Medical and Surgical Correspondence.

REMARKS ON ERYSIPELAS;

By Thomas D. Mitchell, M. D.

So far as my observation has extended, the disease termed Erysipelas is more prevalent now than it was some years ago. Whether this is owing to the more general use of luxuries and the habit of high living peculiar to the times, I am not able to determine. One thing is certain, that some forms of this disease have exhibited of late an unusual degree of obstinacy; and any thing that can be offered by way of facilitating their cure, cannot be unacceptable to the medical practitioner.

A case came under my notice not long since, that is well calculated to confirm the truth of the above remarks. The erysipelatous affection was confined for a long time to the lower extremities, on the calf of the leg and about the ankles. It commenced with a slight degree of inflammation, which was generally not of larger extent than the size of a crown piece. This inflammation was in every respect of the true erysipelatous kind, and the insupportable itching attending it, caused the subject of it to scratch the parts, whereby the skin was abraded, and ulceration speedily induced. Sometimes, without any abrasion of the cuticle, a kind of suppuration ensued in the cellular membrane, which, by spreading under the true skin, occasioned an abscess of considerable size, which presently burst and left an ill-conditioned ulcer, always much larger than could have been imagined from the first appearance of the inflamed part. The rapidity with which these ulcers spread, is a circumstance that ought not to be overlooked, and is, in my opinion, a remarkable characteristic of the erysipelatous ulcer. I have said, that sometimes a kind of suppuration took place previous to

the formation of the ulcer. By this I mean, that perfect pus was in no instance formed, but a kind of bloody matter, a fetid sanies, which seemed to act as a solvent of the soft parts, and so enlarge the ulcerating surface. In addition to this, I would observe, that these erysipelatous ulcers tended rapidly to the gangrenous state, and it required not a little exertion to arrest the sphacelating process. As may be supposed, the pain was very great; indeed, it was found necessary, in order to give tolerable relief, to employ anodynes repeatedly. After a cure was effected, there remained in the part a sensation, which I have found almost invariably to attend this sort of ulcer; a sensation somewhat of the nature of a slight electric shock, or the unpleasant feelings excited by the action of a weak galvanic pile. This sensation was easily produced, by rubbing the hand against the place in which the ulcer was originally seated, and though very disagreeable at first, appeared gradually to diminish. It is impossible to describe it in words, for although I have been the subject of it myself, I know not in what manner to communicate a correct idea of it to one who has never felt it.

I have remarked, that these ulcers were confined to the lower extremities, and this was the fact so far as regards the cases that came under my notice. The erysipelatous inflammation, however, frequently attacked other parts, as the face, hands, and the groins. But in those cases, ulceration never occurred; most probably, owing to the parts being less remote from the centre of the circulation. The disease usually terminated in the ordinary way, by desquamation of the cuticle! All the circumstances combined, satisfied me clearly, that the disease was not merely a local one, but had its seat in the morbid state of the whole system.

I wish it were in my power to speak definitively, in respect of the cure of these erysipelatous ulcers. I am confident that, in my own case, not less than fifty supposed remedies had a fair trial, yet few of them deserved the credit of even alleviating the disease. I may speak confidently, however, of the effect of diet-

ing in this malady, as being signally beneficial: In persons of ordinary health, I believe it to be impossible to effect a cure without attending strictly to low diet. The reverse of this, however, is true (as I have witnessed) in persons of debilitated constitutions, where it was essentially necessary to allow a nutritious regimen. In addition to low diet for persons of ordinary vigour, there is another remedy, of which I can speak in the most decided manner, and that is, *rest in a recumbent posture.* This should be constant, and should be made more effectual than it usually is, by the application of splints to each side of the leg, extending from below the sole of the foot to a short distance above the knee. This kind of splint is applicable where the ulcers exist in the front or back of the extremity; but when they are seated on the sides, splints may be made, without difficulty, to answer the same intention.

Of the efficacy of blisters I cannot say any thing very positive. They were not, certainly, in my hands as successful as some persons have alleged them to be. For the purpose of arresting the gangrenous tendency, and producing healthy pus, I found nothing half so serviceable as a poultice of bread and milk, with the addition of a small quantity of strong lie and Peruvian bark. This was prepared, by first boiling the bread and milk, so as to effect an intimate mixture; after which a table spoonful of bark was added to about half a pint of the bread and milk mixture, and as much lie as would reduce the whole to a proper consistence. This poultice invariably corrected the fetid smell, arrested the progress of sphacelation, and generated healthy pus.

I have used the various mercurial unguents in different states of mixture, but with very little benefit. In short, there was scarcely an ointment that could be named, which was not resorted to; but my experience is opposed to such applications altogether, as being rather prejudicial than otherwise.

A variety of lotions was employed, alternately, sometimes with apparent advantage. Of these, the most active and useful was a decoction of poke root,

which evidently favoured the process of healthy granulation. It may be worth while to mention an effect of this decoction, which is certainly remarkable, and for which I would like some one to account, who is fond of investigating such subjects. At the moment of washing the ulcers with the decoction, a general heat was diffused over the surface of the body, and the face suffused as if from erysipelatous inflammation. This was not an occasional effect, but was invariably the consequence of using the decoction.

When the erysipelatous inflammation does not run into the suppurative or ulcerative state, but is simply accompanied with the itching and burning, peculiar to the disease, there is no remedy so excellent as the following:—Take of tar and flowers of sulphur, each a table spoonful; of mutton suet one pound: melt the latter, and stir in the two former, so as to make an ointment, or rather a cerate. Apply this to the part affected, and it will, so far as I have seen, invariably remove the unpleasant feelings accompanying this sort of inflammation. This prescription is not mine, nor do I know to whom to ascribe it; and indeed it is of no consequence whose it is, provided it be useful.

Thus have I thrown together, without any order or regularity, a few facts and observations on an important subject. Let not the confused state of the matter depreciate whatever may appertain to it, of utility or interest. My design was to contribute a mite towards the advancement of the healing art, and I trust that the object will not be wholly frustrated.

Norristown, (Pa.) Feb. 9, 1820.

Observations on Tetanus, in a Letter of S. Ffirth, M.D. to Felix Pascalis, M.D.

Hyde Park, (S. C.) July 22, 1819.

Dear Sir,

In perusing the page of Medical History, in studying the progress of general science, the application of theoretical principles and of practical deductions,

how often have I been led to deplore that philosophy and medicine were ever separated;—that a Locke, a Newton, and a Verulam, while they shed light on every subject they treated, should pass over medicine, leaving the science involved in more than Cimmerian obscurity!

Had such characters treated thereof, induction ere this would have led to certainty, if in any degree it be attainable: They might have reconciled or explained contradictory facts. Often, very often, do they apparently occur, creating doubts, producing anxiety and perplexity. Hippocrates appears to have been impressed therewith. He says, "*Vita brevis, ars longa, occasio præceps, experientia periculosa—oportet autem non solum medicum exhibere, seipsum facientem quæ decent: sed et ægrotum, et adstantes et externa.*" After attentively studying the history of a disease, its rise, progress, and termination, the remedies deemed most advantageous therein, and those that were found or supposed to be injurious—close the book—take up another—read on the same subject; oft, how similar the symptoms! how different the treatment! each pretending to be founded on experience.

This applies particularly to tetanus, a disease you cannot fail to know; though, alas! too many fail to cure. With surprise have I witnessed treatments so diametrically opposite, and though I know it to be an axiom, that all extremes meet in a point; yet in tetanus, I am sorry to observe, this point has not been health. In some parts of the United States, the practitioners bleed copiously, give enemata of tobacco-smoke, or a decoction of the leaves; use the warm bath, give calomel, and rub the patient with mercurial ointment. Other medical gentlemen prescribe the cold bath, wine, bark, opium, alchohol, ether, and apply blisters: Some use the stramonium, and a variety of articles. I have been informed, that a gentleman of Maryland acquired great celebrity, by giving very large doses of the oxy-muriate of mercury, so as to excite ptyalism, &c. My informant stated, that he gave half a grain, and repeated the dose every two hours; but if

he found the patient violently affected, he gave two, or even three grains at once, and repeated in eight hours. His object was to excite an inflammation of the stomach and salivary glands; thus producing a new action, which by transcending, suspended the diseased excitement.

From what I have seen of this disease, it appears to differ in its force very materially in different climates. In a high northern latitude, it seldom occurs except from wounds or bruises, whereby a nerve is punctured, lacerated, or injured. Whereas, in the West Indies, in some parts of Asia, and sometimes in South Carolina, it occurs from sleeping exposed to the nocturnal dews. The disease arising from the latter cause I believe to be cured with more facility than the other.

I recollect to have met with some observations of an American writer, in which he says, "Opium is useless, and the warm bath hurtful." This remark is certainly not corroborated by the experience of medical men in every country. This disease is, as far as I have been able to judge, more frequent in Asia than any other quarter of the world. Where the disease appears so often, and commits such ravages, we should suppose experience would dictate the most proper remedy; yet, in the military hospitals of Java, Bengal, Bombay, and Madras, and in the Mahratta armies, we find opium constantly prescribed. The practitioner at Ongieu and the medical staff of the Rajah Holkaar's army resort to opium as the *spes et solatium* and the *nec plus ultra*. Opium is used, whether the disease arises from wounds or exposure during sleep to the dews. In the former case, they scarify the part, and excite inflammation; add the warm bath, occasionally immersion in the waters of the Ganges, when practicable. I have, in several instances, seen the warm bath give great relief; the spasmodic symptoms being suspended while the patient remained therein. Upon removing the patient, the symptoms are apt to recur. No more takes place here, than if no such application had been used. Upon removing any tetanic patient, the spasms often recur: It has the advantage of diminishing the force of morbid action.

Nitric acid is a remedy, which I feel little hesitation in saying ought to be tried. It combines several properties which are important; it supports excitement, gives tone to the system, and counteracts the tendency to irregular action in the muscles; like mercury, it creates a new action; like bark, it acts as a tonic. Opium is an antispasmodic, and where is the practitioner, who has used the acid, that will not testify of its antispasmodic power?

Blisters are antispasmodics, and have been used in tetanus with manifest advantage. I have known them to afford great relief to that distressing sensation in the præcordia, of which most patients complain. As a more powerful remedy of this class, I may mention sinapisms, the moxa, &c. The actual cautery has been of service. Long since, it was recommended to be applied to the injured part, in all cases where this disease arose from local causes. In wounds it promises to be and certainly has been advantageous, after the punctured or wounded nerve has been divided, which should always be particularly attended to. In cases arising from contusions, sinapisms may be used instead of the cautery. I have been remarkably successful in the treatment of tetanus; I am led to believe much more so than any other individual in the United States. I have succeeded in curing 32 cases out of 36 that have occurred in my practice, since my residence in St. Paul's parish.

Want of success has, I believe, often arisen from not perfectly understanding the nature of this disease. Many of the faculty believe it to be a disease of debility or asthenia, others, that it is entirely sthenic. Could not these difficulties be reconciled by a little attention? Is it not evident that debility is the predisposing cause? Is not this proved by the disease occurring so frequently in hot,—so seldom in cold climates? Are we not aware that in cases of tetanus arising from wounds, contusions, punctures, and other local injuries, if the nerve be divided above the injury; its connexion with the sensorium thus prevented; and by the local application of stimuli, so as to induce inflammation,&c. in the

part, the disease is prevented, and if already arisen, is mitigated, and frequently subsides, more especially if the tone of the system be properly supported by diffusible stimuli? Does not this tend to establish the principle?

Direct debility is always accompanied by accumulated excitability; indirect debility by diminished excitability. Debility of the first species places the person in a situation which enables less stimuli to produce powerful effects, and thus increase the excitement. In tetanus the muscles are excited by the irritation of the nerve, conveyed to the sensorium, thence producing sensation and irregular morbid motions, which are reconveyed to every part. Counteract this by giving tone to the debilitated body, and destroying the connexion of the nerve, the disease is cured. Allow it to proceed, the debility is overcome, and great excitement ensues; the disease changes its nature; is now sthenic. Reduce this by depletion; for by this alone this change can be effected. Produce again debility, and tonics will again be serviceable. Give tonics during sthenic action; the patient is injured. Sometimes, by pushing them, till an indirect debility occurs, the patient is placed in a similar situation to that when the disease commenced, (save the nature of the debility and the quantity of stimuli necessary,) and recovers. Pursue the other plan, induce direct debility; give antispasmodics and tonics, your patient will have a much better chance of recovery; your practice will be rational, and you will meet with better success. It then resolves the practice thus: If called immediately after an accident, divide the nerve; produce local inflammation and general excitement. If more time has elapsed, and inflammatory symptoms exist, deplete freely, largely; reduce the increased morbid excitement. When this is effected, restore the natural healthy tone, and destroy the disposition to the recurrence of the spasms. If this second stage be over, use powerful stimuli. These can alone afford the patient a chance of life. In all cases it is necessary to divide the nerve, and produce suppuration in the part, or to excite con-

siderable action there. Hunter's axiom, that no two actions of unequal force can exist in the system at the same time, is here to be applied to practice, and may be successfully employed. I create a new action so powerful as to transcend the disease, and thereby save the patient. With this view, the preceding theory being kept in mind, and the patient in a proper state to produce such local excitement as shall transcend the disease, I employ blisters, mustard plasters, the cautery, and fire, in the way I stated to you when in your city, and with the happiest effects. To illustrate fully the mode of practice I have adopted, I shall subjoin several cases. They are extracted from my *case-book*, having regard to such as will exhibit some variety in the medicines employed.

I have the honour to be, &c.

S. FFIRTH.

A Case of Scrophulous Tumors and Curvature of the Spine, successfully treated, by Charles Hall, M.D.

St. Albans, February, 1820.

DEAR SIR,

HAVING had for a few months past what I conceive to be an important case of surgery, partly intrusted to my care, you will suffer me to transmit you a brief description of the same, and should you think a knowledge of this case would have any tendency to promote surgical investigation, you are at liberty to give it publicity.

P. S. Esq. of Highgate, in the county of Franklin, called on me in the month of August last, for advice relative to a disease of the back, with which he was seriously afflicted. He was then on his return from the south, where he had sought medical assistance for the alleviation of this formidable complaint. On examination, I found his case to be a curvature of the spine, affecting three or four of the dorsal vertebræ, situated between the lower angles of the scapulæ. His chest was considerably fallen forward, leaving something of a hollow between the prominent points of the shoulders.

The spine below the curvature was crooked laterally to the right. His general health appeared not materially injured, otherwise than what had arisen from the local disease. He had a partial difficulty in respiration, occasioned by the alteration of the chest, which had induced a general lassitude throughout the whole body. He had experienced no paralytic affection of the lower extremity, as is frequently the case in this disorder; and what renders the case somewhat singular, there was situated on each side, between the margin of the ribs and the spine of the ilium, an elastic tumor, bearing about equal distances from the protuberance and the spine between them, being about five inches. These swellings appeared to be deep-seated, though they raised the parts covering them, which were rendered considerably tense. They evidently contained some kind of fluid. He informed me, that the curvature had existed about one year and a half; but the tumors had not been observed till within six months; had not experienced any pain of consequence in these swellings, nor in any other part, excepting at the commencement of the curvature, when, for a number of months, it was attended with pains of a rheumatic nature in the muscular substance about this part. He also informed me that he experienced similar pains about ten years before, and discovered at that time a slight projection of the vertebræ. This, however, gave him no further uneasiness until the present attack, when the curvature increased rapidly.

He is a man about thirty-six years old, of middling stature, naturally straight, of a good constitution, of industrious and temperate habits.

While on his tour to the southward, he called on several surgeons of eminence, for counsel respecting his disorder; among whom he applied to Dr. Mott, of the city of New-York, who gave it as his opinion, that the tumors contained pus, and came in consequence of the curvature, and that the vertebræ had become defective in their organization, so that they yielded to the superincumbent weight of the body more in some parts than in others; whence the crook and curvature

of the spine. Other surgeons, whom he consulted, gave a different opinion; some said it was a rheumatic affection, existing in the soft parts, and others contended that this complicated disease arose from a scrophulous habit, and that the tumors contained a gelatinous fluid. The patient, however, informed, that they all agreed that the tumors ought not to be opened, but rather removed by the help of issues, constantly kept up about the spine, and by the assistance of compresses and bandages, and, at the same time, make use of muriate of lime, muriate of iron, &c. internally. This prescription has been faithfully attended to.

From the evident fluctuation in these swellings, which were increasing in size, and the probability that they had arisen either from a change in the structure of the vertebræ, or from the relative position of the ribs to the altered state of the chest, bearing unnaturally against the soft parts, and since he had already become constitutionally affected, and hectic symptoms fast approaching, I felt strongly impressed with the idea, that these tumors ought to be opened, and their contents let out. But being guided by the opinions of more able and experienced practitioners, I did not feel willing to take the responsibility on myself alone: Therefore I wrote to Dr. Smith, of New-Haven, Connecticut, on the subject. Dr. Smith coincided with the opinion of Dr. Mott, relative to the nature of the complaint; but advised to have the tumors punctured immediately with a common lancet, and after discharging all out, to let the orifices heal; and when matter should be again collected, puncture them as before.

I now felt myself authorized, in some measure, to proceed, according to my previous inclination. On puncturing the tumor on the left side, which had become the largest, the matter projected several feet from the patient, from which we took rising three pints of pus, with a little coagulum of the same fluid mixed with it. From the right side we took upwards of a pint. After evacuating these sacs, we closed the orifices with adhesive plaster, over which I applied compresses and bandage as before. For the first week

his general health improved fast, and there was no appearance of matter having again collected. Six or eight days after I was called again, and learned that he had suffered considerably with chills and fever, and was very restless. I found, on examination, that the cavities were partly filled. Accordingly, I punctured a second time. From the first I took one pint, and from the other half this quantity. Considering the thickness of the parts covering these sacs, which was an inch and a half, and the additional distress the accumulated matter produced, I did not think proper to close the orifices, as before, but left them open, through which the matter could be discharged as it collected.

He now gained in health and strength, and the cavities gradually became lessened; so that there is now but a small pipe, an inch deep on each side. They would have closed before now, had we not made use of means to keep them open. Under the above treatment he is now in a fair way to recover, though the curvature in appearance has not met with any perceptible change.

I do not know that I have ever read of a like case of curvature. Indeed I believe that a collection of matter is not common to the disorder, especially deposited in such regular order, on each side of the spine, as it was in the above case. Besides, I am not clear that the matter proceeded from an ulcerated state of the vertebræ; it probably might have resulted from the projection of the ribs against the soft parts, producing some degree of irritation; yet, according to the current opinion of suppuration, inflammation ought to have preceded this collection, which was not obvious in this case. There are some, however, who attempt to account for the secretion of pus, in some instances, without previous inflammation. Adopting the former opinion, it would be most reasonable to infer, since he had felt no pain or soreness in the tumors, but mostly confined to the curvature and its immediate vicinity, that the matter originated in this part, and descended in a similar direction, and was collected in these depending cavities.

A Case of confirmed Epilepsy, complicated with Visceral Obstruction. Successfully treated, by Joseph J. A. Gamard, M.D. of the Faculty of Hale.

Philadelphia, May 3d, 1820.

HIPPOCRATES says, that when epilepsy attacks a person in childhood, and continues after the age of puberty, it is incurable. This opinion of the father of medicine obtains credence even in our days: The following, however, is a similar case, that was radically cured.

A girl (now between 19 and 20 years of age) residing in this city, was seized, in childhood, with different complaints, and treated accordingly; but in a short time her sickness assumed a more serious character, and it appeared that she was periodically attacked by convulsions, which gradually became more frequent and of longer duration. They were attributed to the acute pains which she experienced. Bleeding and mercury, I was informed by her parents, had been employed. It was thought adviseable to await the accession of puberty, at which period of life a favourable change is frequently effected by nature, whose efforts, besides, might be assisted by proper remedies.

When that period arrived, I administered powerful emenagogues; but the catamenia were not promoted thereby, and the patient's state became every day more alarming. Her physicians pronounced her disease incurable, and advised the parents to place her in the Marine Hospital of Pennsylvania; and when I saw her, she had been there six months. The attacks of her complaint had increased in frequency and duration, and were complicated with dull pains, obstruction of the liver, and dry nervous cough; her sleep was disturbed by tormenting dreams; she laboured under a general atrophy, cold sweats, and sometimes colliquative diarrhœa; her nails were curved. The latter symptoms, attended by slow fever, were considered as a proof that the patient was also consumptive. The parents solicited my attendance. When I first saw the

patient, it appeared to me there was very little hope of her recovery. Although against my inclination, I was prevailed upon to do something for her in the Hospital, and on the 21st of May, 1818, I commenced my treatment, by prescribing a sudorific with sassafras, sarsaparilla, and liquorice. Two days after I gave an emetic, composed of muriate of ammonia and corrosive sublimate. This may appear an extraordinary medicine, since, as an emetic, its use has never been recommended; but I declare that it operates in a most favourable manner, and may be employed, without fear of any of the bad effects that emetics sometimes produce.*

The above formula being the principal medicine that I relied upon, I devised my treatment of other indications, within the intervals of its operation, when I prescribed diluted orange flower water, occasionally a little wine and water, with sugar and cinnamon, and now and then a pill of four grains, composed of aloes, gamboge, mace, and castile-soap, in equal parts: But I made it a rule to anticipate future paroxysms of epileptic convulsions; and before, or after, I administered several drops of the sublimate solution. In one instance, the patient having already taken it, and appearing to be labouring under its operation, assisted with warm water or chamomile tea, raised a great quantity of phlegm and slime, which was tough and viscid. She was again served with tonic or cordial drinks.

This mode of treatment had been pursued about two weeks, without apparent alteration. It was, however, evident that Mary Ann could bear it, and was not, in any respect, made worse or debilitated. But I thought it was now time to alter my treatment, and transport the force of my remedies from the primæ viæ to the abdominal viscera. I, therefore, prepared pills of four grains each, with extr: alöes, scammon:

* Six grains of corrosive sublimate, triturated with the same quantity of muriate of ammonia, will promptly and perfectly dissolve in a few ounces of rain water. Two or three drops of this solution in warm water, according to age, is, as we understand, the vomitive used by the writer. EDITOR.

and cicuta; pulv. belladon: gum. gambog: and æthiops mineral in proper proportions, adding a small quantity of corrosive sublimate and castile-soap; one of these to be taken morning and evening; at first an interruption of one or two days being prescribed. The dose was, for some time, daily augmented by one pill. This treatment having been continued for about one month, and during June, I perceived that the patient, although somewhat fatigued by the medicines, had recovered a more natural colour, and some degree of muscular strength. The epileptic paroxysms, also, were lighter, and occurred at much shorter periods; yet her friends seemed to be discouraged, and to despair of her perfect recovery, until regaining her spirits, and especially her appetite, I thought it proper to encourage this progress by diminishing the power of the medicine. To the last pills I substituted the former, which she took at more distant periods. For her drink I prescribed the decoctions of valerian and lichen islandicus, sweetened with honey or molasses. With these appropriate means, and better to assimilate all her functions to those which appertain to a healthy state, I devised frequent exercise of the body, by walking, and sometimes by riding. As yet her mind had been like that of epileptics, gloomy, confused, despondent, a stranger to the comforts of healthy feelings; but I endeavoured to promote her consciousness of a renewed excitability, by whatsoever could animate imagination and create hope and courage. Finally, the desired function of her age and sex, finding no further impediment from a clogged and torpid circulation, made its appearance. At this period, nature alone had the merit of this critical and happy change, without any further stimulant; and towards the autumnal period, I declared her perfectly cured. She gradually gained still more decided appearances of health and strength; was married, and became a mother, full of health and joy.

INTELLIGENCE.

Atmospheric Constitution, Diseases *and* Mortality *of the City and County of New-York.*—May, 1820.

Our records, during 23 years, in relation to meteorological observations and temperature, have seldom presented more striking instances of progressive regularity of seasons, and fewer atmospheric vicissitudes, than the two last and present quarterly periods. Not many causes can be assigned to so beneficial changes in our orbit, except, probably, the hand of industry, characteristic of a great population, formed under a political system best calculated to attach man to his soil, and inspire him with the ambition of personal worth. Every thing is improved by his dominion. Dreary regions are converted into luxuriant fields; impenetrable forests opened and cleared; stagnant waters drained off or collected into large streams, for irrigation, or other purposes. With these, succeeding generations claim other waste lands as the patrimony of new settlers. Rich crops soon succeed each other there, where nature formerly presented nothing but mouldering masses of its spontaneous productions; and millions of fires are kindled, as it were, to purify the ambient air, or create a more benign influence of seasons.

We find it proved, by the pages of history, (and also those of Hippocrates, who described the inhospitable climate of continental nations of Europe and Asia,) that arctic latitudes above the 45th degree were in a great measure inaccessible and uninhabited, owing to the length and asperity of the winters. We know, also, that a comparison of the climate of Gallia, Brittania, and Germania, at the period of the conquest by Julius Cæsar, to the present age, would be as dissimilar as that of the Labrador and Esquimaux to the middle states of our Union. This difference of temperature and climate, after the lapse of many ages, is to be accounted for, neither by the precession of the equinoxes, nor by the inclination of the polar axis, or else

why would the extremes of temperature be so much greater in the new than the old hemisphere? Their proportionate regularity is, therefore, evidently progressing under a more extended agriculture and an abundant vegetation, both renewed at each annual period, and evolving oxygen and caloric, the principal constituent parts of the atmosphere, which best promote animal and vegetable life.

After the tempestuous N. E., E. and S. E. snow storm of the 17th of January, the thermometer fell to 16° (Fahr't.) but it soon rose again to 20°, and varied between this and 30° till the 8th of February. The temperature was never lowered afterwards, and its lengthy and gradual ascent continued to keep vegetation and exhalation inactive, until the equinoctial period; the more effectually, as the snow fell several times abundantly, and was frequently renewed.

In the ordinary rotation of winter diseases, *pneumonia*, *rheumatisms*, *catarrhs*, *ophthalmia*, *erysipelas*, &c. have been principally observed, and in all of them the inflammatory character predominated during the two first months of the year. This abated considerably at a more advanced period of the season, and the same diseases were distinctly noticed under an asthenic diathesis. They were in a great proportion replaced by *intermittent fevers*, *cephalalgia*, *diarrhœa*, and *spontaneous ulcers*, among the labouring class. At the approach of spring, an anomalous eruptive disease appeared among adults and children: In the latter, being attended with fever and cough, it was frequently mistaken for *rubeola*, until a succeeding attack of the genuine complaint proved, perhaps for the first time, that the measles might, like the small pox, have its diminutive, ephemeral, and spurious forms. The vigilant and attentive inquiries of the officers of the Board of Health have not detected a single instance, in this great population, of the last much dreaded complaint. At this advanced period of the year, we have also the pleasing task of announcing that a considerable decrease of mortality has taken place since 1819, and in a greater proportion than that from 1818.

1820.		1819.	
January,	239	January,	250
February,	187	February,	223
March,	197	March,	199
April,	211	April,	226
	834		898

Decrease of 64 deaths in 4 months;—of 89 in 12 months.

Yellow Fever in Antigua.

We are informed by A. Musgrave, M.D. of that island, that, in the year 1816, the unwelcome visiter returned, after a long absence, and evinced its true nature by the same characters in which authors have always clothed it. It attacked the Europeans, as usual, and spared the natives; but of all descriptions of the former, the Scotch felt its direful influence most. Among Europeans it did not make much selection; the full-blooded and the thin, the male and the female, came equally within the sphere of its power. In respect to the point of contagion, Dr. Musgrave joins his voice to the countless host which now stamp so decided a negative on that question. He also adduces evidence of secondary attacks of yellow fever, in opposition to the supporters of Dr. Pym's opinions. He believes that the yellow. or what has been termed the Bulam fever, is only the highest grade of the marsh or remittent fever of the country. The state of the atmosphere presented nothing unusual; the heat was by no means intense; the only thing remarkable was this, that after each day's rain the "crop of cases" was more numerous and severe than before. A sharp gale, amounting almost to a hurricane, in September, produced no salutary influence on the disease.

Mercury was not used in a salivating character till late in the epidemic, when some army and navy surgeons had recommended it. It was then conjoined with the depletory system, and proved useful. From

the black vomit, Dr. M. never saw but one recovery. As for treatment, our author observes, that the man who wishes to save his patient, must act with decision, or he will fail in his object.

Case of Hereditary Ichthyosis. By J. P. Martin, Esq.

Jane Holden, aged three years. Her whole skin, except the face, is covered with scales, or rather warty or bristle-like projections, varying in colour, from the lightest brown to the deepest black; in some parts having a yellowish tint, as if scorched by the fire. They vary in size and form, in different parts of the body, but are mostly long and flat, and standing at right angles to the skin. They are easily removed when they grow long, and are constantly exfoliating and renewing. The child seems to suffer no uneasiness from this extraordinary state of the cuticle, except a slight occasional itching, and is, in other respects, strong and healthy. The disease commenced without any previous or concomitant constitutional disorder, when the child was three months old, beginning about the joints, and upon the soles of the feet. It commenced in the mother about the same time. Her cuticle is nearly in the same state as the child's, except upon her neck, bosom, and fore-arms, where it is natural. Her legs are completely encased in thick scales, and at a distance might be taken for those of a negro.

Medico-Chirurgical Journal.

Description of two male and female living Fetuses, born in Cadiz, 1818.

Antonia Fernandes, aged 28 years, was, for the first and at regular time, safely delivered (30th of May) of two fetuses, male and female, adhering to each other by the bottom of the abdomen. The conjunction had

been so effected, that one umbilical funis served for both, being inserted at a central and equidistant point. Their vertebral columns, by meeting together, pressed each other, and the pelvis of the female took to the left side, and that of the male to the right. These parts, with the lower extremities, the anus and parts of generation, were well developed in the former, and the meconium and urine easily discharged; but, as if pressure had been greater from one to the other, it prevented the development of the latter, whose lower extremities were united into one limb at the opposite side, containing two femora, two tibias, and two fibulas, and all the bones of the feet half separated. The anus of this was imperforated, the sexual organ nothing but a small appendage, like a melon seed; so that his meconium and urine must have been discharged by the organs of the female. He had also several deformities of tumefaction on the neck and breast, and depression on the head. Each fetus, from the vertex to their point of union, measured 21½ inches; but the thoracic cavity of the girl had 13½ inches in circumference, and was one inch larger than that of the boy. They were both baptized in the Cathedral church, and lived five days. During travail no difficulty had occurred. This extraordinary occurrence is authenticated by Don F. Flores Moreno, *proto-medico* of Cadiz. A similar fact has, however, been recorded a few years ago in the *Journal Universel*, vol. ix. page 125.

Semeiological Observations. Partly from the French.

Sec. I. *Posture.*—The attitude which a sick man assumes, during sleep, is often indicative of the state of certain functions, and is not to be overlooked by the attentive physician.

1. In health, the limbs are all in a state of demi-flexion and relaxation; but this must be carefully distinguished from a somewhat similar appearance which takes place in disease, from a total loss of muscular power, and which is indicative of the greatest danger.

2. In inflammatory diseases, in the greater number of inflammations, and at the approach of eruptions, the patient is so tormented with heat and anxiety, that he is *constantly changing his position*. In the worst species of fevers, on the other hand, he lies on his back, in a state of *supination*, which is at once the sign and the effect of prostration of strength. The muscles have so little power, that the whole body gravitates as it were towards the earth, from whatever position it is placed in;—hence the appearance of the patient descending towards the foot of the bed, because it is lower than the head.

3. If the patient, while in a posture of supination, has the lower extremities thrown asunder, and the arms, feet, neck, and breast uncovered, although these parts are cool, the danger is great. The same applies to the half open state of the eyes and mouth, with the head reclining backwards.

4. To find a patient lying on his face is a bad sign, as it indicates approaching delirium, or severe abdominal pains. It is a good sign when the patient tries to find an easy position, by turning himself from side to side; especially when he can lie a good while in the position so chosen, in a state of demiflexion.

5. In peritonitis, the easiest position is on the back; but when one of the abdominal viscera is affected, the patient can more frequently lie on *that* than on the sound side, on account of the tension produced by the latter position. To this, however, there are many exceptions.

6. In *pleurisy*, the patient almost always lies on the sound side; when suppuration takes place, it is just the reverse.

7. In *peripneumony*, the danger is great, when the dyspnœa obliges the patient to sit up.

8. In *phthisis*, there is nothing very certain to be learnt from the decubitus. In general, however, the patient lies on the diseased side.

Lithotomy—Recto-vesical.

Dr. N. Barbantini, chief surgeon of the Royal Hospitals of Lucca, has successfully extracted from the urinary bladder, a stone $3\frac{1}{2}$ inches by 3; $1\frac{1}{2}$ inch thick; $9\frac{1}{2}$ oz. weight, of a flat and ovular form. A peasant, probably 50 years of age, healthy by constitution, but worn down by the formation and torments of this enormous concretion, was the fortunate subject, and in two months and a half was perfectly cured and healed.

The ordinary process of perineal lithotomy had been anticipated by Barbantini, as inapplicable to the uncommon size of this stone, (which, of course, he had well judged,) and he determined upon a recto-vesical apparatus.

He thought that if a long grooved sound were interposed between the stone and the surfaces to be incised in the rectum, after he should have divided the sphincter ani upon a catheter, he certainly must be able to grasp and extract the concretion with a sizeable forceps, the branches of which he should take care to have separated, to fit them in the part, as directed in obstetric cases. He proceeded, accordingly, commencing by an incision an inch from, then under, and past the sphincter ani in the rectum, being guided only by the feeling of the catheter, which the stone prevented deviating; he also cut into the bladder, above the prostrate, and already with the naked finger felt the stone through this aperture; he placed under it the grooved sound, and upon it divided the bladder and the rectum as far as necessary. The rest of the operation need not be detailed. Suffice it to say, that with very little difficulty the stone was extracted. No untoward accident supervened. Proper cautions were immediately used to prevent an immediate closing of the wound; but the operator, after many days, thought it necessary to explore the cavity of the bladder, and he fortunately discovered a few small calculi still adhering. While endeavouring to remove them, a false membrane, with which they were incrusted, came out

in several parcels, at three or four different times. The operation was then completed. An elastic catheter was placed in the meatus urinarius, to direct the urine into its natural course, and it gradually ceased to flow from the anus. It is to be remarked, that injections into the bladder and rectum had been incessantly recurred to, in order to oppose irritation and admixture in those cavities of their respective excrements.

The success of Dr. Barbantini has elated him so much, that he has contended that the honour of discovering this operation belongs to his nation, and he proves it, on the authority of Haller, by an Italian surgeon of the 16th century, who had devised the same operation. He thereby invalidates the claim of Mons. J. S. Sanson, of Paris, who, a few years ago, took the same subject for his inaugural dissertation. The editor of the *Journal Universel* replies, wever, that this old quotation is not to be depended upon, and is neither correct nor conclusive; that many like it might be found in the books of the 14th century, equally uncertain! He severely censures his countrymen for their indifference and neglect, in abandoning to foreigners the opportunities of improving their discoveries and conceptions, which they afterwards claim as their own. In a similar case, indeed, Mons. Dupuytren, under the influence of the mentioned dissertation, has performed with success the recto-vesical lithotomy on a young subject! We cannot determine whether the French writer contends for the priority of the theory, or the practical mode of the present operation. If the first, we must be permitted to say, that the idea or indication of the recto-vesical operation is not at all a modern discovery. If the second,—well, then, we must, like the pastoral poet, confess:

"*Non nostrum inter vos tantas componere lites.*"

Scutellaria Lateriflora. (Skullcap.)

Of this famous plant we would have nothing more to say, had not the *Journal Universel* of Paris (April last) brought it to notice, with its thousand wonderful cures, from the pamphlet of our Dr. L. Spalding. As the editor apprehends that it will soon be laid aside and forgotten, we are surprised that he should have wished for a certain quantity to be used. The complete botanical description is sufficient for the learned to recognise the *precious article*, wherever it exists, and if not, it would have been better to have asked for seeds; dried specimens might indeed injure the reputation of the antidote. The author on this side of the water, it appears, has not been well understood by the Parisian editors; and that he should not remain any longer at variance with them, we subjoin his letter on the subject.

To the Editors of the "Journal Universel des Sciences Medicales à Paris."

GENTLEMEN:—Observing in your Journal for Feb. 1820, some remarks on my pamphlet on Scutellaria, I am constrained to say, that the pamphlet was written for the express purpose of bringing together all the evidence, on which the newspaper and popular reputation of the scutellaria rested, that the medical public might be the better able to judge of the antidotal powers attributed to this plant. I intended to give nothing more than a simple history of its use in hydrophobia, without expressing my own opinion of its virtues.

It is believed that a faithful history was given of all the cases in which the scutellaria had been administered; and in each instance the authority on which it rested, was quoted.

Having no information which I did not communicate, and never having witnessed the administration of the remedy, I did not presume to arrogate to myself the right of intruding my opinion upon the public. This would have been particularly indelicate at a time when experiments were making, with the remedy, in

every section of the country; and when its virtues must soon be decided by the infallible test of experience.

You have, in your Journal, unintentionally drawn an erroneous inference, when you say, "Il rapporte des faits qui paraissent positifs. Le nombre des hommes guéris par l'employ de la scutellaire s'éleve à 850, celui des animaux à plus de 1100." The pamphlet says, "We have then the *foregoing* testimony that the scutellaria has been used by more than 850 persons, bitten by animals believed to be rabid; and in only three instances have symptoms supposed to be hydrophobia supervened; and furthermore, the scutelleria *is said* to have been administered to more than 1100 brutes, bitten by animals supposed to be rabid."

You also observe, that the American physician pretends that the scutellaria is a specific against hydrophobia. The pamphlet certainly does not express such an opinion as being entertained by the author; but, on the contrary, I have invariably declared, both before and since the publication of the pamphlet, that there was not sufficient evidence to convince any medical man of the prophylactic and antidotal powers of scutellaria.

I have the honour to be,
Gentlemen, your most obedient Servant,
L. SPALDING.

Fevillea Cordifolia, Nhandirobe.

There is in France a very celebrated universal antidote against all vegetable poisons, which is cultivated with great care in the *Jardin du Roi;* it is the *Fevillea Cordifolia*, (dioecia pentandria of Linnæus,) growing like a creeper. Its alexipharmic virtues are contained in the fruit, a large spheroid, three cleft hard drupe, in which three or four kernels are found. These are of yellow soap-like substance, and very bitter. It is ascertained that the discovery of this admirable production (vide *Journal Universel*, February) is due to a

negro slave, who saved the life of his master's horse, when nearly dying, having been accidentally poisoned by the water of the *manioc*. He only bruised and mixed the substance of the seeds in water, which he poured down the throat of the animal. A part of the same seeds were given to the experimenter, who writes on the present subject for the Annals of the Academy of Physical Sciences of Brussels. It is, however, remarked, that, notwithstanding the claim of the discoverer, Brown has recognised the alexiteric plant in his *Flora Jamaïcensis*, but in a superficial manner, and without facts to support his assertion. Now, a few dogs and cats, which have been duly experimented upon. suffice to establish the reputation of the Nhandirobe, and its utility to mankind; for it having been given mixed with the extracts of *cicuta virosa*, the *hippomane mancanilla*, the *rhus toxicodendrum*, and the *nux vomica*, the animals have invariably recovered; but, on taking these poisons separately, they have perished in the most horrid pains. The next object has been to ascertain, by a chemical analysis, in what peculiar principle of the *fevillea* its antidotal virtue resides. The substance has been treated in four different ways. Six residues have shown no properties equal to that of the union of the whole in the plant. After all, this alexiteric property may be nothing but a purgative quality, which by age, they say, becomes a violent and dangerous vomitive!

Medical Properties of the Prussic Acid.

Our readers will recollect that we have already noticed this chemical compound as a narcotic poison, and that, as such, its analytical attributes could be depended upon as proper tests to report legally in cases of poisoning by vegetable narcotic substances. Its deleterious quality is so powerful, that when concentrated and pure, and in a very small dose, it rapidly destroys the muscular vitality of any being that breathes.

There are facts proving that it equals all that history relates of the *aqua toffana*, by which many sovereigns are said to have been poisoned in Italy, and of the celebrated poisoner *Laucust*. [Vide *Annal. de Chimie.* Nov. 1817.]

The experiments of Orfila with the prussic acid, which were extended upon all sorts of animals, and even upon insects and fish, were all attended with similar deadly results. He relates the death of Professor *Scharinger*, of Vienna, by the accidental contact of the concentrated prussic acid with his naked arm.—*Vol. II. Part* 1.

The subject now calls for our attention in a beneficent and more interesting point of view. Since the famous report of Mons. F. Magendie to the Academy of Sciences, which was immediately published in England, and has circulated through Europe, an imposing mass of facts has been collected (vide Silliman's Amer. Journ. of Sciences) to prove the medicinal properties of the prussic acid in pulmonary complaints, as well as in spasmodic and convulsive affections, and the Medical Faculty of Paris have placed it in their new *codex* of remedies. It seems, however, that the existence for a few years of the reputation of this article cannot sufficiently command our confidence, except upon the score of our own experience and perfect knowledge of its various modes of exhibition, as there is no complaint or morbid state of the human body but requires judicious and well-founded therapeutical rules; therefore, a few remarks more of our own, may still suggest the necessity of those studious and comparative researches respecting this article, which alone can establish the utility of new and powerful remedies.

The *prussic*, or *cyanic acid*, has yet been found only in the leaves of the *prunus lauro-cerasus*, in bitter almonds, in the kernels of the black cherry, and those of the *amygdalus persica*, or peach. In these vegetable substances it is extremely diluted. It is frequently the result of various chemical operations, such as the distillation of animal and vegetable substances, submitting them to the action of potash and soda, with

the addition of some metallic solution, or of nitric acid. An ammoniacal gas, made to pass over burning charcoal, also produces prussic acid, which may really be defined an unoxigenated acid. In 100 parts, it is said, 51 are azote, 44 carbon, 4 hydrogen; one is from various decimal fractions of the three.

The celebrated Scheele first discovered it, but made it with too great a proportion of water. Mons. Gay Lussac obtained it concentrated and pure. Messrs. *Porret* and *Proust* have more systematically regulated its composition and properties. It has been called *cyanic acid*, from its power of precipitating ferruginous saline compounds of a beautiful blue colour. To give an idea of the dilution which that acid requires, we subjoin several recipes from Silliman's Journal; also, his directions to procure the same.

Take of Prussic acid—12 drops,
Rose water—half oz. fluid,
Syrup of poppies—3 fluid drachms.

Take of Prussic acid medicinal—1 drachm,
Distilled water—1 lb.
Pure sugar—$1\frac{1}{2}$ oz.

Take of infusion of ground ivy—1 drachm,
Prussic acid medicinal—15 drops,
Syrup of marsh mallow—1 oz.

Take of Syrup officinal—1 lb.
Prussic acid medicinal—1 drachm.

N. B. Dr. Alfred S. Munson, upon whose skill and care every degree of reliance may be placed, will supply practitioners with this acid, manufactured by him, corner of York and Elm-Streets, New-Haven.

Electricity of the Human Blood.—Annali Universali di Medicina de Milan.

Bellingeri, of the faculty of Turin, has demonstrated, by many new and interesting experiments, the evolu-

tion of the electricity of the human blood, in relation to diseases, the existence of which had previously been explained by Hales, Pfaff, and Vassali.

1. The electricity of the blood is always greater than that of the atmosphere; it exists, however, in different degrees, according to health or disease, always independent of the variations of that which is external.

2. In the most perfect state of health, blood holds a medium between the electricity of iron and that of copper.

3. Diseases form two classes, those of the diminished electricity, and those arising from its augmentation.

4. It is remarkable that, in an inflammatory state, and acute attacks, electricity is considerably diminished, but in the chronic state of disease, is increased. The two opposite conditions are of course according to the intensity of the disease, and are governed just like the vital principle of Brown. A few drops of blood being sufficient to ascertain its electrical state in dangerous and perplexing cases, we might, by obvious means, recognise the nature and degree of the disease.

5. If blood forms a buff, the degree of electricity necessary for health is deficient; but there will be no buff if there is even more electricity in the blood than is wanted.

6. The electricity of the blood is increased by bleeding; hence, the first that flows is always thicker or darker, less electric, and more buffy than the last; but this rule is not without exception. When out of the body, the blood's electricity becomes in equilibrium with that of the atmosphere, or it could not lose its fluidity.

7. If submitted to accumulation of electricity, it will long remain fluid; but in inflammatory diseases, where it has lost a great proportion of it, in the same ratio it loses, in part, in fluidity; is thicker, and does not circulate well.

8. Blood which coagulates quick, retains under the crust the electricity which is natural to it, as its surface

is an obstacle to its escape. Hewson has remarked, that the cruor underneath has the faculty of retaining its natural fluidity.

9. As soon as the blood has separated the crassamentum or cruor from the serum, and has lost its own degree of electricity, it remains in equilibrium with the atmosphere.

Such are the interesting results from the experiments of the learned Bellingeri, the importance of which is so obvious in a medical and practical point of view, that it is hoped they may be confirmed by similar and still more accurater esearches.

AMERICAN GUM.

Communicated by Dr. John Gibson, of New Madrid, April 7, 1820.

I have lately made a discovery. A gum, similar to Gum Arabic, can be made in great abundance from the wild grape vine of this country. The purest and most transparent kind was collected the other day, from a vine that had been divided for the purpose of transplantation, which, by standing in the sun, produced a quantity of the pure gum.

We know a number of vegetables that produce gum, generally combined with the gallic acid, such as the amygdalus persica, (peach tree,) cerasus sylvatica, or prunus virginiana, (wil dcherry,) and some others; but in the grape vine it is pure and unmixed. The greater part of the western country is overgrown by this scandent vegetable, and more especially the valley of Mississippi. The vitis æstivalis, and vitis labrusca of Bartram, produce it in greater abundance than the other varieties. As soon as the sap begins to rise in the spring, is the season to collect it. The mode of manufacturing it is simple, cheap, and requires but little labour to produce it. Divide the vine, and set a vessel under it to receive the water that flows from its wounded vessels. This water evaporates by insolation, and

produces the gum without any farther trouble. It would seem from this, that the clear, transparent sap of the grape vine is nothing but the pure gum, held in solution by water. Any quantity might be manufactured of a superior quality to that of the East, sufficient not only to supply the home market, but that of Europe also.

Colchicum Autumnale.

We are informed that the vinous infusion of this bulbous production has of late been successfully introduced in our Hospital, for chronic rheumatism, and that the most beneficial effects were justly anticipated from it.

Orfila affirms, that the seeds of the colchicum are poisonous; but the properties of the bulb have been so variously spoken of by Stork, Haller, and others, as innocuous or deleterious, that he thought climate and season must greatly contribute to the nature of its qualities. In 1805, Melandri and Poretti of Padua analyzed the roots of the colchicum; but the English have much experimented with its vinous infusion, as a sovereign remedy for the gout. (*Lond. Med. Repos.*) Dr. M. Home employed it upon himself and other persons, with great advantage, at a dose of 70 drops, the only unpleasant effect of which is, that of nauseating the stomach. It is, however, observed by the Editor of the *Journal Universel*, (*Juillet*, 1819,) that the use of the remedy has been continued so long in the case of Dr. Home, that its efficacy might thereby appear doubtful. It is remarked, that the sediment of this vinous infusion can, in small doses, inflame or ulcerate the stomach and bowels; but the liquid being filtered, no ill effect is to be apprehended, and, during its operation, the secretions are increased and the pulse rendered irregular. *Stork* employed it with honey and vinegar, which mode the last mentioned writer would prefer to that used by the English.

Officers of the New-York State Medical Society.

At the Anniversary meeting of the Medical Society of the State of New-York, held at the Capitol, in the city of Albany, the 2d of February, 1820, the following officers were elected:—

Dr. John Stearns, of New-York, President.

Dr. Westell Willoughby, of Herkimer, Vice President.

Dr. C. D. Townsend, of Albany, Secretary.

Dr. John Downs, of Rensselaer, Treasurer.

CENSORS.

Dr. Samuel L. Mitchill, Dr. Felix Pascalis, and Dr. James R. Manley, *Southern District.*

Dr. William Bay, Dr. T. R. Beck, and Dr. Peter Wendell, *Middle District.*

Dr. Westell Willoughby, Dr. Amasa Trowbridge, and Dr. Samuel Voorhes, *Eastern District.*

Dr. Amos Hull, Dr. Laurens Hull, and Dr. Hez. L. Granger, *Eastern District.*

PERMANENT MEMBERS.

Dr. Felix Pascalis, and Dr. Amos G. Hull.

COMMITTEE OF CORRESPONDENCE.

Dr. Henry Mitchill, Dr. Wm. Allen, Dr. Felix Pascalis, Dr. Westell Willoughby, Dr. T. R. Beck, Dr. E. D. Tuttle, Dr. James Downs.

HONORARY MEMBERS.

Dr. Benj. Waterhouse, and Dr. Valentine Mott.

At this Session no less than 25 County Medical Societies of the State were represented by their Delegates. Those of two Colleges of Physicians and Surgeons were also present, besides the permanent and honorary members.

At the annual commencement of the College of Physicians and Surgeons of the University of the State of New-York, held on the 4th of April, 1820, the degree of Doctor of Medicine was conferred on the following candidates.

Isaac Anderson, Pennsylvania, *on Conception.*
James Anderson, New-York, *on Neuralgia.*

William Booth, Jun. Virginia, *on Dysentery.*
Cyrenius H. Booth, Connecticut, *on Epilepsy.*
Larkin Bass, North Carolina, *on the Functions of the Skin.*
Thomas Wilson Henry, New-York, *on Typhus Fever.*
Charles W. Goodwin, Virginia, *on Amenorrhea.*
Hezekiah C. Parks, Georgia, *on Blood-letting.*
Lackington C. Randle, Georgia, *on Blood-letting.*
Warner Jones, Virginia, *on Urinary Calculi.*
Edward G. Rawlings, Tennessee, *on Urethritis.*
Isaac J. Grimball, South Carolina, *on Ascites.*
Richard K. Hoffman, New-York, *on Burns.*
Andrew B. Ewing, Tennessee, *on Dropsy.*
William B. Rogers, Georgia, *on the Diseases of Georgia.*
Benjamin Isherwood, New-York, *on Hydrophobia.*
Le Roy Holt, Georgia, *on Bilious Remittent Fevers.*
William J. Harris, South Carolina, *on Cynanche Trachealis.*
Landon Clanton, North Carolina, *on Dyspepsia.*
John P. Thomas, South Carolina, *on Gonorrhea Dormientium.*
Wm. M'Carthy, New-York, *on Aneurisms.*
Shadrack Gasque, North Carolina, *on Arsenic.*
John J. Vestervett, New-York, *on Hydrocephalus.*
Albridgton Brown, North Carolina, *on Odontalgia.*
Wm. P. Reddick, Virginia, *on Consumption.*
Jesse Batey, South Carolina, *on Suspended Respiration.*
Samuel Breck, Alabama, *on Pneumonia Typhoides.*
David C. Freeman, North Carolina, *on Diabetes.*
Benjamin Ogden, New-York, *on Amputation.*
Thomas A. Duffy, New-York, *on Carbon.*
Isaac J. Rapelye, New-York, *on Varicose Veins.*
Albert Smith, New-York, *on Respiration.*
Wm. R. Bay, South Carolina, *on Icterus.*
Charles Davis, New-York, *on disorders of the Digestive Organs.*
Francis U. Johnson, New-York, *on Lues Venerea.*
James C. Townsend, New-York, *on Climate.*

The Regents of the University of the State, at their last Session, appointed the following Trustees, to fill up the vacancies of the former Board.

J. R. B. Rodgers, M.D. Samuel Borrowe, M.D. John Stearns, M D. Joseph Bayley, M.D. Henry Van Solingen, M.D. Hugh M'Lean, M.D. John Watts, Jun. M.D. Alex. H. Stevens, M.D. N. H. Dering, M.D. Anthony L. Anderson, M.D. Richard S. Kissam, M.D. (*resigned.*) Wm. Moore, M.D.

OFFICERS, PROFESSORS, AND ANCIENT TRUSTEES.

Samuel L. Bard, M.D. *President.* Wright Post, M D. Professor of Anatomy, *Vice President.* Samuel L. Mitchill, M.D Professor of Botany and Materia Medica. David Hosack, M.D. Professor of the Theory and Practice of Medicine and the Institutes. Wm. J. Macneven, M.D. Professor of Chemistry. Wm. Hamersley, M.D. Professor of the Clinical Practice of Medicine. Valentine Mott, M.D. Professor of Surgery. John W. Francis, M.D. Professor of Midwifery, and Diseases of Women and Children, *Register.* John D. Jacques, *Treasurer.* Thos. A. Emmet, Counsellor at Law. Lyman Spalding, M.D. Andrew Morton, M.D.

The present Professors remain Trustees; but, hereafter, the Professors are not to be eligible to that office, nor can they at any time constitute a majority of the members present. The students of medicine to be recommended for the Degree of Doctor, must have attained the age of 21 years, and have attended two sessions of the College, one course at least of each Professor. It is required, moreover, by the statute of 1819, that after the first of May, 1821, each student shall have fully complied with the requisitions contained in the act of 1818, relative to the study of Medical Science, with a regular physician and surgeon, during the term of three years.

It is expected that these arrangements, together with the regulation and limitation of fees for instruction

and graduation, will be equally conducive to promote the future respectability and usefulness of this institution.and the emulation of the candidates, whose preparatory studies are thus secured and controlled, as much as human wisdom can devise. But it is not expected that students in every condition of life, and from distant parts of the state, can undergo the difficulties of a collegiate education, while private tuition and proficiency might otherwise be obtained; the license for the practice of physic and surgery to any competent candidate, is therefore left under the control of the state and county medical societies.

NOTICES OF NEW PUBLICATIONS.

1. Irvine's *Treatise on the Yellow Fever.*

This interesting performance has reached us too late for our analytical Review; but we recommend it, because the author appears to be positive in favour of local origin, and as strenuous in the recommendation of the acetate of lead, for composing the stomach, when that organ is threatened with black vomit, and even when that symptom has supervened.

2. *Pathological Reflections on General Diseased Action, read before the Vermont Medical Society, Oct. 5, 1819.* By Joseph A. Gallup, M.D.

It is intended, in this address, to establish, as a fundamental principle of pathology, that general diseased action prevails over that of the local tendencies of morbid action,which constitute disease in some particular organ. Local affections, therefore, or, in other words, a great variety of diseases composing systems of nosology, are only of secondary importance, and the general diseased state, whether acute or chronic, merits our first and most serious attention.

We have seldom seen an important question in medical philosophy so well treated, within the limits of an address, as this appears to be. It is also illustrative of the Doctrine of *unity* of disease, formerly taught by Dr. Benj. Rush in the University of Penn-

sylvania; and from the argumentative mode of the author, as much as from the importance of the subject, we are led to wish that it could be brought to a more extended plan, and comparatively defended on the experimental ground of practice.

3. *Transactions of the Medical Society of the State of New-York, for the year* 1820; *with the Annual Address of the President,* JOHN STEARNS, M.D. February 3d.

The influence which the mind exerts upon the body, in the production and cure of diseases, appears to be the present scope of the orator. The subject is in itself of an extensive application in a moral and religious point of view, and perhaps indefinite in its exceptions. It is, however, treated in this address with becoming dignity and reserve, and when delivered in its outlines, is, no doubt, as appropriate an admonition as could be offered in presence of the legislature of a state, and all the representatives of medical societies.

4. *An Essay on the Geology of Hudson River and adjacent Regions: Illustrated by a Map of the Geological Section of the Same. Addressed to Samuel L. Mitchill,* M.D. President of the New-York Lyceum of Natural History. By *Samuel Akerly,* one of the Vice-Presidents of the same; in 8vo. New-York, 1820.

This novel and scientific work leads to the history of the earth, or of the accumulated formations which our planet must have experienced from great external or internal shocks or convulsions. It is the first of the kind in this part of the world, and deserves to be classed with the celebrated works of Cuvier, Werner, &c.

5. *Some of the Monthly Numbers of the Second Volume of the Western Review and Miscellaneous Magazine,* have already reached us. This periodical work is particularly devoted to Literature and Natural Sciences. It is published in Lexington, Kentucky, by William Gibbes Hunt, and principally edited by *C. S. Rafinesque,* Professor of Botany and Natural History in the Transylvania University.

OBITUARY.

Died, May 20th, 1820, Isaac Ball, M.D. at the age of 65. He was a native of this city, when taken by the British during the revolutionary war, and was obliged to serve as a surgeon of their military hospital. He was a member of this County Medical Society, a conscientious and humane physician, of amiable and obliging disposition, unassuming, virtuous, and strict moral character.

On the 6th of June, in Philadelphia, Mons. René Laroche, M.D. aged 65 years. He was a graduate of the University of Montpellier, and had retired with his family to Pennsylvania, from the ruins of Cape Français. He eminently possessed the character of a gentleman, the learning, skill, and humanity of a physician.

A CARD.

To Mons. Regnault, Medecin Consultant du Roi, Principal Editor of the Journal Universel, Honorary Member of the New-York Literary and Philosophical Society, &c.

Tendering the assurance of his best respects, the principal editor of the Medical Repository requests the editor of the *Journal Universel* to reconsider the insinuated charge of ignorance in anatomy, against Dr. Edmund Porter and *associates*, in the autopsic examination and description of a case of extra-uterine gestation, related in this volume, page 200. (Vide *Journal Universel*, April 1820, page 112.) It being suggested that an immense hemorrhage in the abdomen could not be attributed to the *coronary arteries*, it is now thought proper to remind the *critic*, that no coronary artery of the *heart* was meant by the above, but properly the *coronary or gastric*, so called by the English; the *coronaire stomacique*, by the French, which is derived from the *cæliac trunk*, and so often supplies the liver with a *hepatic artery*. The writer has said, that the blood came from under the liver! (*Vide Dictionaire des Sciences Medicales, lettre C.*)

ERRATA TO VOLUME V.—N. S.

Page 10, *note, last line, for* miæmæ, *read* mimæ.
Page 52, *line* 15, *for* precision, *read* precession.
Page 113, *line* 12, *for* two, *read* three.
Page 152, *line* 30, *for* phenomena, *read* phenomenon.
Ib.—note, line 1, *for* Hippocrates, *read* Hippocratis.
Page 280, *line* 2, dele *B* before *N. Chapman.*
Page 344, *line* 3, *for* it, *read* they.
Page 376, *note, line* 1, Boerck, *dele* ck.
Page 378, *line* 20, *for* Dr. Hartshor, *read* Dr. Hartshorne.
Page 394, *line* 25, *for* poison, *read* poisoning.
Page 307, *line* 23 *for* creates, *read* create.
Page 404, *line* 2, for *on*, read *or*.
Page 406, *line* 2 *from bottom*, for *Cabilisticâ*, read *Cabalisticâ*.

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OR THE

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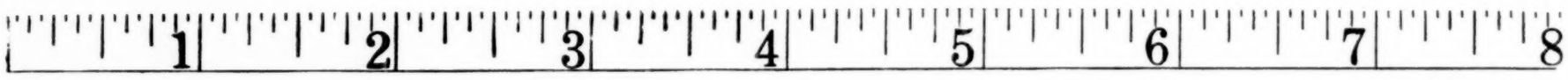

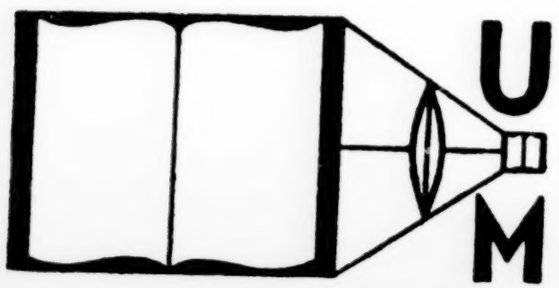

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